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ABSTRACT

This is the report of the field trial and evaluation of an experimental computer-assisted guidance system designed for use by junior and senior high school students. This trial was designed to determine the system's applicability and feasibility in a secondary school setting. It sought also to obtain information on the outcome of its use, both in terms of possible changes in vocational developmental behavior patterns of the students using the system and in attitudes and opinions toward the system by students and their parents and teachers. Included in the report are: (1) a general intrcduction; (2) a description of the system; (3) the field trial, methods and procedure; (4) effects of the system usage on student vocational development; (5) results: attitudes toward the system; and (6) summary, conclusions, and implications. (KJ/Author)

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THE EDUCATIONAL AND CAREER EXPLORATION SYSTEM: FIELD TRIAL AND EVALUATION IN MONTCLAIR HIGH SCHOOL

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New York, N.Y.

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by

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A Report Of A

Teachers College-International Business Machines Corporation Project

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New York, N.Y.
1970

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FOREWORD

This is the report of what may prove to be a major innovation in education, and particularly in educational and vocational guidance. It is the report of the field trial and evaluation of an experimental computer-assisted guidance system designed for use by junior and senior high school students.

School counselors interested in working with students who are better equipped to use their skills, school administrators seeking ways of strengthening their guidance programs, parents who want better information and orientation services for their children, and employers who want young people to approach the labor market with more realistic ideas of where and how they may fit in, should all be interested in the experience and results described in this report.

The Educational and Career Exploration System is an experimental system developed by the Advanced Systems Development Division of IBM at Yorktown Heights, N.Y. The project was conceived by Dr. Frank J. Minor, an experimental psychologist at IBM. Under contract with IBM as consultants, Professor Roger A. Myers and the writer, counseling psychologists on the faculty of Teachers College, Columbia University, collaborated with Dr. Minor in planning a system compatible with career development theory and counseling practice. The experimental system was developed with the assistance of a number of IBM staff members, in particular Drs. Ted Friel, King Gillen, and Guy Pilato (counseling psychologists), Mr. Barry Wilner (computer systems engineer), and Mrs. Marsha Meyer (writer-editor).

The school system invited to cooperate in the field trial was Montclair, N.J. The Superintendent, Dr. Robert W. Blanchard, with Messrs. Paul Shelly and Milton Bierman of his staff; the High School Principal, first Dr. Kenneth Fish and then Mr. Charles Edgerton, with Messrs. Philip Nast and Pierson Fellows of their staff; and the Board of Education headed by President Thomas Hagoort, reviewed the project

and agreed to provide the necessary space, staff time, and cooperation.

Evaluation of the system needed to be carried out by specialists in educational research and in vocational counseling. Under contract between IBM and Teachers College, Columbia University, colleagues of the writer specializing in these fields were asked to assume responsibility for the design of the experiment, the collection and analysis of data, and the writing up of the results. Although the writer of this foreword served as project director because of his knowledge of the computer system and of the high school, the technical responsibility resided in colleagues who had not been involved in the development of the system.

Under the contractual arrangement with IBM, Professor Albert S. Thompson served as Associate Director for policy and as senior author, Professor Richard H. Lindeman carried responsibility for the design and execution of data analysis and shared in the writing, Professor Martin J. Bohn, Jr. served as coordinator of TC-Montclair operations and co-author, and Miss Sylvia Clack served as full-time TC coordinator and monitor in the high school as well as data analyst and co-author. In addition, Professor Jean Pierre Jordaan played a role in planning the evaluation and in designing (with the writer) some of the evaluation instruments. Mr. David Forrest, Research Assistant at TC, provided needed support to Dr. Lindeman and Miss Clack. Mrs. Lou Papalexiou, Project Assistant at the College, has helped in project administration, preparing tables, and editing manuscript as well as doing the actual typing.

Each of the above persons has made essential and wholehearted contributions to this project. Mrs. Eileen Garrett, Miss Elinor Ayres, Mrs. Isabelle Clark, Mrs. Dolores McNeil, Mr. Douglas Carpenter, Mr. John Griffith, and Mr. Pierce Palmer of Montclair High School's Guidance Department also did much to facilitate the field trial. The cooperation of the 156 student users of the system, and of the 158 control students, and of teachers and parents, was a pleasant essential.

Mr. Joseph Mastrangelo of IBM contributed greatly as technician responsible for the terminals in the high school, and numerous unsung IBM staff members and executives who assisted in or backed the development of the System also deserve a word of appreciation in this, the educators', foreword. Thus it is that major technological innovations become realities.

December 10, 1969

Donald E. Super, Ph.D.
Professor of Psychology
and Education

Chapter I

INTRODUCTION

A major role of the student guidance and counseling services in high schools, junior colleges, and universities is to provide students with individualized aid to help them reduce the uncertainty and increase the wisdom of their educational and vocational plans. Frequently this objective is not fully satisfied because of information-handling problems. Two such problems are: (1) the fallibility of both counselor and student in locating, organizing, and selectively recalling educational and vocational facts and (2) the inability of the counselor and the student to devote sufficient time, patience, and energy to perform the enormous number of steps involved in relating educational and occupational facts to pertinent information about the student.

There are three basic processes in educational and vocational guidance: (1) supplying the individual with information concerning educational and occupational opportunities and requirements, (2) helping him to know and to understand his own abilities and interests, and (3) helping him to see the implications of these situational and personal data for his career. The founder of vocational guidance, Frank Parsons, pointed this out sixty years ago.

Inherent in these guidance and counseling processes there is, clearly, an information storage and retrieval process. It is a process which deals with educational, occupational, and personal data, the first two steps in vocational guidance. The capacity of retrieval methods to relate a given type of data to other types of data means, furthermore, that computers can help not only with the first two processes, educational and vocational information and individual analysis, but also with the third, counseling.

It was inevitable that psychologists and counselors should begin work with the computerization of guidance processes. It was to be expected that they would

adapt computer hardware and software to the storage and retrieval of educational, occupational, and personal data in ways which might be helpful to students and to counselors. The first such effort was that of John Cogswell and associates at the Systems Development Corporation in Santa Monica, California (Loughary, et al., 1966). They attempted, with some success, to simulate with the computer what the school counselor actually does in working with students. A number of other projects have, during the last five years, undertaken somewhat similar work. Most of these projects have been more limited in scope (Bohn and Super, 1969), but some have sought fully to tap the computer's potential. Probably the three most ambitious efforts, carried on simultaneously during the last 3½ years, have been those of (1) David Tiedeman (1968) at Harvard with U.S. Office of Education support, the Information System for Vocational Decisions, (2) JoAnn Harris of Willowbrook High School, Villa Park, Illinois, with State Department of Education support, the Computerized Vocational Information System, and (3) Frank Minor of IBM, in consultation with Donald E. Super and Roger A. Myers from Teachers College, Columbia University, the Educational and Career Exploration System.

To date, the development of ECES has involved three stages: (1) development of a rationale for the system, (2) adaptation of the necessary hardware, creation of the data bank and procedures for use of the system, and (3) field tryout of the system with an appropriate group.

This report describes the field trial, performed under contract to IBM by a Teachers College research team. This trial was designed to determine the system's applicability and feasibility in a secondary school setting. It sought also to obtain information on the outcomes of its use, both in terms of possible changes in vocational developmental behavior patterns of the students using the system and in attitudes and opinions toward the system by students and their parents and teachers. The study was carried out during the Spring semester of 1969, with

students using the system during the three months from March through May. The remaining sections of this report describe the system, the field trial procedures, and the outcomes.

Chapter II

A DESCRIPTION OF ECES

This chapter describes the Educational and Career Exploration System (ECES) in terms of its rationale, assumptions, and objectives. To make the operation of the system understandable, there will be a brief description of the equipment used in the system, followed by a discussion of the phases and routines available to the student who participates in ECES.

Rationale

The need for an educational and career exploration system is perhaps best seen within a general framework of vocational development. A person's vocational development is a process which extends throughout his life time and which can be thought of as being divided into relatively consistent stages. Vocational development stages have been defined as growth, exploration, establishment, maintenance, and decline (Super, 1957).

The exploration stage of vocational development usually begins around age 12 and extends until about age 20. During this stage, the individual makes important educational and occupational decisions. In high school, the choice of curricula has implications for later opportunities; in college, the choice of the school and the major area of study affects later occupational performance. During the exploration stage an individual needs information about himself and about the world, new information and new experiences which the person can incorporate and make use of in current decisions and future plans.

Vocational counseling and guidance can provide some of this information and some of the exploratory experiences. Individual vocational counseling usually is an information-processing involving two people, the counselor and the counselee. However, the computer has characteristics which can be used to advantage as a

third element in this information-processing. The computer has capacities to record, store, and recall large amounts of information quickly and accurately. Advances in computer technology and time-sharing have made the use of expensive equipment economically feasible, and the development of conversational modes of interaction with the computer has made computers even more adaptable to the field of counseling and guidance.

Besides being technically feasible, the need for such assistance is clearly seen in the field. Educational orientation and occupational orientation and information are frequently neglected in the guidance services. It is difficult or even impossible for a counselor to remain adequately informed about educational opportunities, job requirements, and the labor market. There are also real limitations on the amount of information that can be transmitted and on the number of exploratory experiences a counselee can have in the traditional face-to-face counseling setting. Finally, the demands on counselor time do not permit extensive time for planning and providing for exploratory experiences, and for evaluating the effects of these experiences.

Assumptions

The nature of vocational guidance and the ways in which a computer-assisted system could contribute to guidance were taken into account in the development of ECES. The main assumptions underlying ECES have been described briefly in an article by Minor, Myers, and Super (1969).

First, the system should be appropriate for individuals who are in the exploratory phase of vocational development and are from varying socioeconomic backgrounds. The target population selected was therefore persons in grades 8 through 12. In order to cover a wide range of socioeconomic types, the system was explicitly designed for persons who planned to enter the labor market directly after high school as well as for individuals who planned to enter

formal post-high school training, whether in technical or vocational schools, junior colleges, or in the universities. It was assumed then, that the system would serve the majority of persons in the exploratory phase of vocational development, regardless of their educational or vocational aspirations.

Secondly, the system should be largely under the control of the student, i.e., the student should have options available to him by which he can determine the direction of exploration and sequence to be followed. Learning to deal with these kinds of options and these kinds of responsibilities can provide an experience worth something in itself, in addition to the information which the student may gain in the process.

Thirdly, the student and the system should be able to relate in a conversational mode, i.e., the student should be able to enter as well as receive information from the computer-based system in an interactive mode. This type of approach would be compatible with guidance programs as they are currently established.

Finally, the system should accommodate individual differences in readiness to participate in such an experience. Particularly in the junior and senior high school years, when students are characteristically at different levels of physical, intellectual, and social maturity, a system to be used by students in all of these grades would have to provide more than one operation. With the help of counselors, the original plan was for the student and the counselor to determine at what point it would be most advantageous for the student to begin.

Objectives

ECES was designed to be integrated with existing guidance systems in schools and agencies. Its major objectives were designed to supplement and reinforce guidance and counseling programs and can be summarized as follows.

For the Student. There were three main objectives in regard to the student.

First, it was hoped that the system would increase the person's knowledge about himself in relation to the world of work. This would be achieved through the presentation of data about himself which had been generated in his school performance, his performance on standardized objective tests, and his expressions of his interests and preferences. For information about the outside world, data from standard sources such as the Dictionary of Occupational Titles would be available. This understanding of himself and the world of work could help the student become aware of his multipotentiality and broaden his occupational horizons.

Secondly, there was the objective of permitting the student to explore some of the implications of his educational preferences. Educational or curriculum preferences are related to future career behavior, and the occupations chosen are often the outcome of the curricular choices. On the system, the student could learn about high school and college courses and their occupational potential.

The third objective was to provide a system which would facilitate the complicated process of selection of an institution of higher education. By comparing and contrasting institutions along meaningful dimensions such as location, courses offered, and cost, the student with the help of his parents and the counselor would be able to make a more informed decision about post-high school training.

For the Counselor. It was hoped that the system would have two main effects on the job of the counselor. First, with an information-processing system available to the student, the student could directly relate to the system and could increase his own fund of information, raising his level of understanding of the process of choosing and preparing for a career. Thus, the counselor would be able to begin working with students at a higher level of problem solving,

effectively reducing some of the time-consuming preliminaries which can be handled by instruction from a computer system.

A second and very real saving for the counselor would be the system's capability to serve as a comprehensive, up-to-date library, easily accessible to the student. This would free the counselor from some of the clerical and more routine sorts of detail work involved in maintaining such a facility.

ECES Components and Their Use

In order to understand the ECES program and its functioning, there is a need for a brief description of the equipment and configuration of the components in the system. Exhibit 1 shows a student using the system.

Equipment

The equipment used in ECES consists of two main components: 1) an IBM S/360 computer located at an IBM site, and 2) terminals which can be installed locally. These terminals are connected to the computer by means of telephone lines and consist of the following elements:

a. Film image display unit. Under computer control, this unit projects information from a 1000 frame film strip which is loaded into the terminal by the student. The student responds to the information; this response is interpreted by the computer which directs the presentation of the next appropriate frame. This type of display unit was selected because of the quality of the pictures and the greater convenience of film strips compared with slides. See Exhibit 1.

b. A numeric keyboard. On this keyboard, the student responds to the information and questions presented by the system. Much of the information is presented in a form which requests a response in a multiple-choice format. In working with the film image display unit, the student responds on the keyboard, and the computer then directs the showing of the next appropriate frame. A

Exhibit 1. A Schematic Illustration of the Educational and Career Exploration System (ECES)

Components: Film image display unit, numeric keyboard, and typewriter printer.

numeric keyboard was used because of its adequacy and simplicity: this keyboard could provide enough options without being unnecessarily complicated.

c. A typewriter printer. The printer prepares messages based on the student's current keyboard responses, his past responses, and the profile from his school and test performance. These messages, consisting largely of narrative and interpretive charts, are taken by the student for his later review, by himself or with his parents, counselors or others. See Exhibit 2 for parts of a sample printout.

Typewriter messages were chosen because they are easy to read, do not take long to produce, and are permanent, suitable for later review. In contrast, audio messages, while more personalized, are transient and difficult to analyze for content.

The Reference Guide is a student manual which provides a general orientation to the system in addition to a complete listing of the occupations, schools, and majors covered by ECES. Reference guides are placed at each terminal and are made available for students to take with them when they leave the ECES site.

Use of the System

The system is divided into three main phases, with a computer-based information bank associated with each of these sections. These sections are 1) Introduction and Phase I: Vocational Orientation, 2) Phase II: Educational Orientation, and 3) Phase III: Post-High School Educational Search.

Introduction and Phase I: Vocational Orientation

At the beginning of the student's interaction with the ECES, the general framework of the system and its logic are explained by a monitor. For each student a student profile based on his performance in school and on standardized objective tests has already been entered into the data bank. As part of the

Exhibit 2. Sample Part of Student Printout

SUMMARY CHART

AREAS IN WHICH YOU AND THE TESTS 'AGREED'

	Estimate
Learning Ability:	Middle Third
Interests:	
Outdoor	Lower Third
Technology	Lower Third
Arts and Entertainment	Middle Third

AREAS IN WHICH YOU AND THE TESTS 'DISAGREED'

	Your Estimate	Test Estimate
Interests:		
Scientific	Upper Third	Lower Third
Social Service	Middle Third	Upper Third
Business Contact	Lower Third	Upper Third
Business Organization	Upper Third	Middle Third
General Culture	Lower Third	Upper Third

introduction, the student enters his own self-estimates of his learning ability, vocational interests, and his expected level of educational achievement. The profile based on school records and test performance then is compared, by the computer, with the student's estimates, and the agreements and discrepancies are presented to the student. In the case of some discrepancies, it is suggested that the student see his counselor and discuss these differences. This comparison is the first of numerous charts and printouts available to the student.

After the introduction, Phase I of the system includes occupational information which the student may use in the processes of browsing, exploration and clarification. The system provides a framework for organizing occupations, the opportunity to explore tentative career preferences, and the chance to pursue clarification by detailed analysis of specific occupations.

The World of Work. To provide a way of organizing the vast amounts of occupational information available, the world of work was divided into four levels of educational requirements and eight major fields of activity. This 4 by 8 system, adapted from Roe (1956), arranged occupations according to similarity in the primary foci of activity in the jobs. Examples of occupational fields are Business Organization, Technology, and Service. The educational levels are not presented with specific definitions; instead, education is described in a range from "some" to "more". This was done so that students would not initially be discouraged from considering occupations at higher levels of education.

Exploring Tentative Career Preferences. After mastering the basic concepts of level and field as they apply to the world of work, the student may then proceed to browse and explore occupations in the system. "Browse" refers to the process by which the student indicates his preferences for kinds of work activities, work conditions, and educational aspirations. From his answers to questions in these areas, the computer provides a list and brief descriptions of

occupations compatible with his preferences. The student is able to enlarge or restrict the number of occupations presented to him in his browsing activity. He may repeat the procedure as often as he chooses to, and upon wishing to leave the browse routine, the system provides summary information. The summary includes 1) a comparison of these occupations with data from his school and his self-estimate profile, and 2) the names of occupational fields which are compatible with his school profile and his self-estimate profile, but which he did not list in his own tentative career preferences.

Exploring tentative career preferences can serve two important functions: it can point up inconsistencies among the student's preferences, aspirations, and profiles; secondly, it can broaden the students' horizons of possible relevant occupations which may not have occurred to the student. Exploring tentative career preferences leads naturally to the next step in Phase I.

Clarification by Detailed Analysis of Specific Occupations. Browsing is the initial looking over the occupation world; clarification is a more detailed investigation of those occupations which seem to warrant further study. From the occupations tentatively considered during browsing, the student usually narrows his range and decides to explore a number of specific occupations more deeply. On considering these occupations, an issue is whether or not the occupations and the individual have characteristics which are compatible. This is determined by examining what the person sees his own characteristics to be, what the characteristics of workers in that occupation really are, and what his reaction to certain aspects of the job are. To clarify reactions to the occupations, these elements of a job are considered: duties performed, training requirements, employment environment, competition, career growth potential, salary, creativity opportunities, degree of difficulty and variety of tasks, and method of entry.

One way in which the student is made acquainted with the nature of the work

of a particular occupation is through a work-sample, in the form of a games-playing task. As shown in Exhibit 3, the student is presented with brief problem-solving situations relevant to the occupation; in this situation the student gets a hint of the activity involved in that occupation. The situation is not a test, so the subject does not feel judged by his performance on the task. If he wishes to consider other topics of information listed as available, he may so request. In selecting topics, the student is also made aware of some of the linkages between topics, such as between "advancement opportunities" and "educational requirements".

Proceeding from one topic to another, the system records the student's responses and relates them to the previous information from his school profile and self-estimates. This is designed to personalize the system for each individual user, thus helping him interpret the data in light of his own unique situation. This process of comparing and relating information from different sources can be illustrated by considering the example of a student who requests information about worker requirements or training requirements of a given occupation being considered.

Before providing such information, the system asks the student to give his impressions of the requirements of the occupation. His answers are compared with the actual requirements and with his earlier statements about his estimated learning ability and his educational goals. The student is asked whether or not he feels the requirements are possible in light of his own answers, and whether or not he would be willing or able to complete the requirements. If the student says that he cannot, the system inquires as to the reason, and in cases where it is feasible, the system helps the student check the accuracy of his opinions. Where possible, the system suggests alternative routes to reaching the same goal, e.g., suggesting on-the-job training if formal education does not seem appro-

Exhibit 3. An Example of a Problem-Solving Situation Relevant to an Occupation

You are an accountant who, among other tasks, prepares income tax returns. A widow comes to seek your professional assistance. Which of the following sources of income is not taxable?

1. Earnings from part-time job
2. Dividends from investments
3. Social Security benefits
4. Sale of family heirloom jewelry

If 3... Right! Social Security benefits are exempt from taxation if the earnings do not exceed $1680 a year. Earnings, dividends and sale of private property are all taxable.

If 1,2,4... No, you've guessed wrong. Earnings, dividends and sale of private property are all taxable.

It is her Social Security benefits that are not taxable if her earnings are less than $1680 a year.

priate. Exhibit 4 shows some alternatives in such an interchange.

The system records the student's responses during his consideration of occupations in detail, and when the student completes his clarification sequence with a particular occupation, a printout report is prepared by the system. These reports are of two kinds. First, a narrative report is the simple record of the student's progress through his exploration of the occupation; this is provided so that the student can review it at a later time. The second type of report is an interpretive report which checks the logic and consistency of the student's answers and progress. For example, the student's answers may be inconsistent if at one time he says that he likes a certain kind of work activity, but when asked in regard to a specific occupation, he states that he does not like that activity. Another example might be the student who has high educational goals, but who states that he does not believe that he has the ability to master the educational requirements of an occupation with minimal educational hurdles. This interpretive report can be used by the student and by the counselor in later discussions of the student's plans.

After completing the desired activities of Phase I: Vocational Orientation, the student may go directly to Phase III: Post-High Educational Search. However, if the student is concerned about his high school curricular decisions or major areas of study in post-high school formal education, he would move to Phase II: Educational Orientation.

Phase II: Educational Orientation

This phase of the system is most appropriate for the student who plans to continue his formal education beyond high school. This section can be useful to students who have no vocational goals expressed in terms of tentative occupational choices, students who express their goals more adequately in terms of curricular preferences, or for students who are interested in the particular occupational

Exhibit 4. Some Alternatives in Response to a Question about Being Willing and Able to Complete Educational Requirements

Would you be willing and able to complete these educational requirements to become an accountant?

1. Yes - goes to "What would you like to do"
2. No - goes to "Reasons why you can't"
3. Not sure - goes to "Reasons why you can't"

Reasons Why

1. Takes too long
2. Concerned about my grades
3. Can't afford it
4. Military obligations
5. Other reasons

(4.) If you enlist, the following training programs are available:

Army - Clerical
Air Force - Accounting, finance, auditing
Marines - " " "

implications of curricular choices.

The student becomes acquainted with areas of study found in instructional programs in junior colleges, technical schools, vocational schools, or four-year colleges or universities. From the areas of study available, the student names the ones which appeal to him. From this input, the system expands the areas which might be considered and relates these choices to their occupational implications. This is done by 1) suggesting other areas of study which are compatible with the student's interests and with the areas he has already mentioned; and 2) informing the student of the occupations which are usually entered by individuals who have chosen the majors he has suggested.

Following his experience with this phase of the system, the student can return to Phase I to browse through and explore occupations, or he can proceed on to Phase III: Post-High School Educational Search.

Phase III: Post-High School Educational Search

For the student who plans to continue his formal education, the final phase of the system provides assistance in selecting an institution for his post-high school training. This part of the system can be used both by students who express their goals in vocational terms and by those who have expressed them in educational terms. The search is designed to help the student develop a list of institutions which satisfy his curriculum objectives and his personal preferences.

After identifying schools which offer programs consistent with his curriculum objectives, the student may restrict the number of schools he wishes to consider by stating his preferences along these dimensions: a) geographical location, b) size of the school, c) public or private, d) all male, all female, or co-educational. The number of schools which meet the student's preferences depends on his tolerances in regard to these factors.

The student is then given a list of institutions which satisfy his

preferences with respect to the four variables. For each institution on this list, the work sheet provides the following data: degree of selectivity of the college or school (this information can be related to the student's pre-college examinations and his grade-point average), availability of ROTC, residence facilities, religious affiliations, and living and tuition costs. In addition to institutions which meet the student's preferences, he can also receive the same information for any specific school which may be of interest to him. The list, with this information, is available for the student to use with his counselor and his parents in the search for post-high-school institutions.

Summary

In summary, this chapter has presented a brief description of the ECES system as used in the field trial with the underlying rationale and objectives which influenced its design. It is important to keep in mind that the basic concepts used were those of vocational development and the basic intent is to facilitate vocational development through guided exploration of vocationally relevant characteristics of the individual and of the educational and occupational world within which the individual develops his career.

Chapter III

THE FIELD TRIAL: METHODS AND PROCEDURE

Objectives and Overall Design of the Study

The objectives of the field trial were to determine the technical feasibility and the effectiveness of ECES in a real school setting. The design of the field trial was organized around the following questions:

1. Will students who use this system possess a higher level of educational and vocational planning maturity, a better knowledge of decision-making principles, processes and information, and a more realistic self-concept than before their use of the system?
2. Are the types of information provided in the system used by students in the expected sequence and expected frequency? The implications of their usage patterns for guidance services will be developed.
3. What changes occur in the counselors' activity patterns as a result of students' using the ECES system? It is expected that the kind, amount, and frequency of aid given by counselors will differ for the students who use the system as compared with those who do not use the system.
4. When students who use the system are compared with students who use conventional counseling services available in the high school, is there a greater improvement in the former group in terms of educational and vocational planning maturity, knowledge of decision-making principles and a more realistic self-concept?
5. How effectively does the student use the ECES media, and what difficulties are encountered in understanding the ECES language material and procedures?

In order to assess the effects of ECES an experimental group of high school students were compared with a control group of students. These two groups were

selected from the same high school and were matched on the independent variables of grade, sex, race, and post-high school plans.

The experimental group was given access to ECES and participated in the system; control group students were not given access to ECES. In the pre-test of these groups, questionnaires and interest and aptitude tests were administered. Both groups completed a general questionnaire after the field trial. The experimental group also gave their reactions to the system on a separate post-test questionnaire and on an in-process student reaction form.

The major comparisons between these groups began with a comparison of the pre-test data, in order to establish the similarity of the groups before their exposure (or lack of exposure) to ECES. Following these initial comparisons, the experimental subjects were compared on the pre- and post-test measures, and the experimental and control groups were compared on the post-test measures.

The dependent variables of relevance to the evaluation were vocational development constructs such as Vocational Maturity, Knowledge of Vocational Decision-Making Information, and Realism of Self Concept. Post-test differences on these measures between the experimental and control subjects could presumably be attributed largely to their experience in ECES.

The majority of the data gathered in this study were measurements on the students themselves, since the primary interest in the evaluation study was on the effects ECES might have on students and how they used the system. To assess the effects from a different perspective, data were also collected from other persons involved with the ECES field study, specifically the counselors, the teachers, and the parents.

In summary, the general design of the evaluation study was a comparison between experimental and control groups of high school students, with the experimental group having had experience on ECES. These two groups were equalized

on major characteristics, so that differences which might appear at the end of the study could reasonably be attributed to ECES. In addition to experimental-control group comparisons, the reactions of the experimental group to ECES and their use of the system were studied.

In addition to the study of any effects of the use of the system, the field trial was also valuable in its determination of the feasibility of ECES in an actual operational setting and its applicability to a secondary school population.

Involvement of the School and Community

Selection of Montclair High School. Montclair High School, in Montclair, New Jersey, was chosen for the ECES field trial because it satisfied the design requirements for the field test site. The high school serves an ethnically and socioeconomically heterogeneous population of students from grades nine through twelve, offers a comprehensive curriculum, and is the only public high school in its community. It is located within a reasonable distance of the IBM laboratory and of Columbia University, and, therefore, would be easily accessible to the research team. Because these characteristics insured representative student sampling, ease of installation and service of terminals, and convenience for the research team, the school was invited to cooperate in the public trial of ECES.

Involvement of the School. Negotiations with the Superintendent of Schools and the Board of Education were undertaken and support for the project grew. Arrangements for the provision of office and laboratory space and for related services were made. During the negotiations, the project was described, the system demonstrated, and discussed with the high school officials for their evaluation and advice. The Associate Principal and the Director of Guidance played an active part in completing the arrangements necessary for the field trial. The Director of Guidance, the Counselors, and the Staff of the high school lent essential assistance in the pre- and post-testing of the students

included in the project, and in the preparation and evaluation of the student data to be used in the system's data base. The Counselors' knowledge of educational and training institutions used by Montclair High School graduates helped in tailoring ECES to local resources and requirements. Counselors also participated in deciding on the amount of their participation in the functioning of the project. They agreed to keep records of their student contacts during the field trial so that any effects it might have on their work could be analyzed. A clerical member of the Guidance Department staff was assigned on a full-time basis to the project staff to act as the school's monitor of the system during the field trial. The Director of Guidance, in consultation with project staff, was responsible for student orientation to the system and the students' participation in the project. He also handled the demonstration and presentation of the system and the project to teachers, parents, and the community at large, with appropriate project staff assistance.

Involvement of the Community. When negotiations with the Superintendent of Schools and the Board of Education were completed, a demonstration and presentation of the project was given to the Council of the Parent Teachers Association of Montclair in order to familiarize them with the project and its goals. In addition, the parents of all students included in the sample were notified of their children's involvement in the project and were given the option of withdrawing. None did so. During the field trial, an Open House for Parents was held, with an explanation and demonstration of the system, followed by a question and answer period, with discussion which held a substantial group for a total period of two hours. Reaction was positive and interest in the possibilities of the system was clear.

The community at large was informed of the project by means of a Press Conference planned and held in cooperation with the Board of Education's Coordinator

of Public Information. The system was demonstrated and appropriate information and photographs were distributed, and the Montclair Times published a story on the project.

During the field trial, visiting groups of counselors, school administrators, public officials, and other interested individuals were given demonstrations of the system during visiting hours after the students' sessions were completed for the day. In all such instances, interest in, and enthusiasm for, ECES was strong. Demonstrations had to be carefully scheduled so that student use of the terminals was not disrupted by the active interest of those wanting to see the system in use.

Field Trial Procedures

Selection of Students.* A vital part of the field trial of ECES was the determination of the system's applicability and effectiveness for all students, regardless of sex, ethnic background, and future educational plans. If such a system as ECES is to make a meaningful contribution to the work of counselors in their efforts to help students maximize the development of their interests and abilities, it should have value for both males and females, for students with differing ethnic backgrounds, and for those students seeking immediate post-high school employment as well as for those planning education or training beyond high school. In order to evaluate whether such universality could be claimed for ECES, several types of students were represented and included within the experimental and control groups. Sample selection was specified by the following criteria:

1. that the sample be composed of equal proportions of ninth, tenth, eleventh, and twelfth grade students;
2. that both black and white students be represented in terms of the

*The authors are indebted to Dr. Theodore Friel of IBM as a primary source of information on details of procedures described in this section.

existing ratio within the high school, i.e., 33% black, 67% white;

3. that males and females be included in equal proportions;
4. and that the proportion of college-bound students approach the national average, i.e., 55% college-bound, 45% non-college-bound (non-college-bound here defined as including any educational or training program less than a two-year college, as well as students not planning any education or training beyond high school).

The actual size of the sample was determined by a number of factors. Due to the limitations imposed by the availability of only four custom-built experimental terminals, the existing schedule of eight periods per school day, and the various types of students to use the system, it was decided that one ECES session per week for each student would be suitable for the purposes of the field trial. The result was a maximum possible number of 160 students using the system per week.

The population of students from which the 160 were to be chosen was provided by Montclair High School staff, who supplied the researchers with a list of all students grouped in terms of sex and grade, making a total of eight unique lists. Fifty names were randomly selected from each of the lists, making a total of 400 students from which a stratified random sample was to be drawn. Montclair High School counselors indicated both the ethnic background and the future educational plans of these 400 students. The categories specified above were filled as completely as available students permitted. Students of the type least represented, the non-college-bound, were scheduled first. The remaining experimental cells were filled in, and the remaining persons were placed in the control group. All students were scheduled to use the system during their free study hall periods so that there would be no disruption of their class schedules. Students without free study halls were placed in a reserve group. When a cell in the control

group was not filled, these reserve students were assigned to the controls in order to complete the requirements for that cell. When the sample selection was completed, the result was 160 students in the experimental group, 160 matched controls, and approximately 45 students in the reserve group.

When student pre-testing requirements were not fulfilled, or when students in the experimental group left school or were in other ways removed from the program, their positions were filled by comparable students from the reserve group. If the schedules of the reserve substitutes could not be coordinated with the available time slots, other experimental subjects were rescheduled in order to accomodate the replacements. In all cases, rescheduling maintained the matching by student type for both experimental and control groups. At the end of the first three weeks of the field trial, the experimental group was "frozen" and subsequent dropouts were not replaced. Free terminal time was then made available on a first-come, first-served basis for members of the experimental group wishing additional time on the system.

The experimental group proportions for the final sample of subjects actually using the system consisted of: 50% male, 50% female; 64% white, 36% black; 65% college-bound, and 35% non-college-bound students. The national proportion of college- to non-college-bound was not attained due to the high proportion of college-bound students in Montclair High School.

Student Use of the System. Each experimental group student was taught by the two system monitors how to use the two-unit terminal, working in one of the four semi-private carrels in the laboratory. He was given his own identification number with which to sign onto the system, his own copy of the ECES Reference Manual for use during his sessions, and was instructed how to identify and load appropriate film cartridges into the image projector. He was then left to interact with the system with the knowledge that the monitors in the outer office

would be readily available to assist him if he encountered any difficulty. The actual introduction to the operation and content of the system was contained in the introductory phase of the system itself, and, in most cases, required little or no assistance in interpretation by the monitors. Each student session was approximately thirty-five minutes long, with sufficient time at the end of the school period for removal of printout from the terminal and for completion of the Student Reaction Form. The monitors maintained a file for each student which contained copies of his printouts and all his completed Student Reaction Forms. Each student was assigned a specific school period each week and the monitors notified the students through the homerooms of each scheduled session. An attendance log was kept by one of the monitors.

An extra hour at the end of each school day was made available to any experimental subject who wished to sign up for extra time on ECES. Competition for the four available slots was evident, with students signing up for weeks in advance. Additional time became available after the experimental group was frozen and no replacements were made for dropouts. These free terminal periods were usually filled by experimental subjects who would drop into the project office to use the extra terminal or to wait to see if any scheduled students were absent, thereby freeing a terminal for someone else to use.

Absenteeism was not a serious problem during the project, although some students skipped sessions, especially during the last weeks of the field trial when final exams were being given in the school. These "no shows" were defined as those students, not absent from school, who missed four or more scheduled sessions with ECES. There was a total of 32 such subjects. They were evenly distributed throughout the four classes, for both sexes, for both educational plans groups, and for the two ethnic groups.

Statistics of student usage were compiled at the end of the 11 weeks of the

field trial. It was assumed that the number of times students used the system could be used as an index of their enthusiasm for ECES. This enthusiasm presumably would result from their perceptions of the relevance and utility of ECES in regard to their own interests, curiosity, and desires for educational and career information. Students were divided in terms of grade, sex, ethnic background, and future educational plans and the average number of times the various types of students used the system was computed in order to determine if any significant differences emerged. The results, in terms of the four general categories, are presented in Table III-1.

Table III-1. Mean Student Usage of ECES by Grade, Ethnic Background, Future Educational Plans, and Sex (N=156)

	Grade				Ethnic Background		Future Educ'l Plans		Sex	
	9	10	11	12	White	Black	Coll.	N-Coll.	Male	Female
N	42	39	41	34	100	56	102	54	78	78
Mean	7.7	6.7	6.8	5.7*	7.0	6.3	6.8	6.4	7.2	6.3**

*When the means of the tenth and twelfth grade students were compared, a t ratio of 3.833, significant at the .01 level of probability, resulted.

**t=1.720, significant at the .05 level.

As the above table shows, all but two groups of students used ECES for a comparable number of sessions. There were no significant differences of usage between students in grades nine, ten, and eleven, between whites and blacks, and between the college-bound and the non-college-bound students. Male students did use ECES significantly more times than female students and twelfth grade students used the system significantly fewer times than students at any other grade level. The twelfth grade students' relatively low usage of the system is attributable to the lateness of the field trial in their high school careers, and the probability that their post-high school plans and initial occupational preferences would be fairly well defined by March, the time of their exposure to ECES. The

difference in usage between males and females may be explained by the culturally determined emphasis on appropriate sex roles and interests. On this premise, males would be expected to show more interest in the mechanical aspects of working with computers and even in the kinds of information contained within the system. Due to the emphasis on the male as the breadwinner, and therefore, as the more likely sex to be employed, the occupational information may have been considered more relevant by the males than by the females. It may not be so justifiable to extend this sex difference to the higher education information contained in the system; however, it is accepted in some lower socioeconomic groups that higher education for females is less desirable or important than it is for males. Whether, in fact, males did use the occupational information section relatively more than did the females is a question that could be answered at a later date when the system's section tracer can be analyzed. For the purposes of this report, however, the question can merely be raised.

Given the general similarities and the specific differences in usage shown by the means in Table III-1, the question arises as to whether further differences would be revealed by finer groupings. Table III-2 therefore presents means for white and black, college-bound and non-college-bound, males and female students.

Table III-2. Mean Student Usage of ECES in Terms of White and Black, College-Bound and Non-College-Bound, Male and Female Students (N=156)

	Sex and Future Educational Plans							
	Coll. Males		N-Coll. Males		Coll. Females		N-Coll. Females	
	N	Mean*	N	Mean*	N	Mean*	N	Mean*
White	32	7.2	18	8.0	34	6.9	16	6.1
Black	19	6.6	9	7.2	17	6.7	11	4.5
Total	51	7.0	27	7.7	51	6.8	27	5.5

*Means were rounded to the nearest decimal.

The means presented in the above table were compared in order to determine what, if any, significant differences exist. There are no significant differences in mean number of ECES sessions between college-bound males and non-college-bound males, or between college-bound males and college-bound females. These is a difference (t=2.143, significant at the .025 level) between college-bound females and non-college-bound females. However, when ethnic background is taken into account, there is no significant difference between white college-bound females and white, non-college-bound females, although a difference significant at the .05 level (t=1.918) exists between black, college-bound and black, non-college-bound females. There is a slight, but not statistically significant, difference between white and black, non-college-bound females. There is a significant difference between non-college-bound males and non-college-bound females (t=2.213, .025 level), with the males using the system more than the females.

As a general summary of Table III-2, it can be said that college-bound and non-college-bound males used ECES about the same number of times, regardless of ethnic background, and that college-bound females used the system as much as did the college-bound males. However, black, non-college-bound females used the system less than both white and black, college-bound females. In fact, the low usage of ECES by black, non-college-bound females is responsible for the difference in usage between all males and females. When the numbers of sessions of all college-bound females and of the white, non-college-bound females were combined and compared with the number of sessions that all male students used ECES, there was no significant difference between the two groups.

In order to examine the influence of grade level on the various groups contained in Table III-2, means were compared on the basis of ninth and tenth grades combined and eleventh and twelfth grades combined. Although the twelfth grade students used ECES less than the other three grades, the groupings were made in

terms of the first two years of high school versus the last two years in order to maintain statistically sufficient numbers of subjects in each subgroup and to try to combine the students in terms of age and school experience. These means are presented in Table III-3.

Table III-3. Mean Usage of ECES by Combined Grade Levels, Sex, Ethnic Background, and Future Educational Plans (N=156)

	Sex and Future Educational Plans								
	College-Bound				Non-College-Bound				
Combined	Males		Females		Males		Females		Ethnic
Grade Levels	N	Mean	N	Mean	N	Mean	N	Mean	Background
9/10	17	7.3	16	6.9	9	9.6	10	5.9	White
	10	7.0	7	8.3	5	9.0	7	4.8	Black
11/12	15	7.0	17	6.7	9	6.2	6	6.5	White
	9	6.2	9	5.5	4	5.5	4	4.0	Black

Of the 14 statistical comparisons made, only two groups were found to exhibit significant differences in usage of the system. The first, that between black, non-college-bound ninth and tenth grade males and their college-bound counterparts, is significant at the .01 level (t=9.345). The students not planning further education beyond high school used the system more than did those male students of the same ethnic background and grade levels who do plan further education beyond high school. However, there was no such difference between white college-bound and non-college-bound ninth and tenth grade males, nor between black, college- and non-college-bound eleventh and twelfth grade males. As shown in Table III-2, when all college-bound and non-college-bound males were compared, there was no significant difference in amount of use of ECES. In addition, in Table III-1, no significant difference occurs between grades nine and ten in terms of usage. It seems, then, that through the finer distinction of grade levels combined with ethnic background and future educational plans a high-use subgroup can be identified, namely male, non-college-bound, ninth and tenth grade students.

It may be that, although future education is not currently a goal among this

high-use group, such plans may be a result of lack of information about further education, educational requirements associated with occupations, or about occupational possibilities themselves. It may well be that the experience of ECES, by providing such information and exposure, could be viewed by such students as more valuable and interesting than it is by students with sufficient knowledge and goal direction to have planned further education. It would be extremely interesting to see whether this non-college-bound group decreases in size during the next school year. If a decrease among former ECES subjects was found and was judged to be greater than normal for Montclair High School, it may be that the information provided by ECES was a factor involved in the change of educational aspiration reported by some parents, teachers, and counselors.

The only other combined grade level comparison that yielded a significant difference in system usage is that between the ninth and tenth grade, black, college-bound females and their eleventh and twelfth grade counterparts ($t=2.460$, .05 level), in which the former group used ECES more than the latter. There were no such differences among comparable subgroups of white females, or black, non-college-bound females. The difference may be partially accounted for by the lower usage of ECES by twelfth grade students when compared with students of all other grade levels. One would, however, expect this difference also to appear between the college-bound and non-college-bound females, especially when one considers the extreme difference between black, non-college-bound females and all college-bound females. This difference does not occur at a statistically significant level. When dealing with groups containing such small numbers of students, large differences in variance are needed in order for significance to be established. It may be that more readily explained trends of student subgroup usage would emerge if larger samples were used in subsequent field trials.

Summary. The statistics of usage by the experimental subjects of the

Montclair High School field trial, permit some statements concerning the general appeal of ECES for these high school students to be made. ECES, available late in the school year, was used more by students in grades nine, ten, and eleven than by twelfth grade students. Black students used the system as much as did the white students. There was no significant difference in usage between all college-bound students and all non-college-bound students. In general, males used the system more than did females, but this discrepancy was due to the distortion of the females' average number of sessions by the low usage on the part of black females who do not plan education or training beyond high school. These female students used ECES fewer times at all grade levels than any other group of students. When students were compared on the basis of combined grade levels as well as on sex, ethnic background, and future educational plans, only two subgroups revealed statistically significant differences in usage. Non-college-bound, ninth and tenth grade, black males used the system more than comparable college-bound students. In addition, ninth and tenth grade black, college-bound females used the system more than corresponding eleventh and twelfth grade females.

If one were to identify the "high" and "low" users of ECES on the basis of the Montclair field trial, one could say that ninth and tenth grade, non-college-bound males used the system consistently more than any other group, although not uniformly to a statistically significant degree. As a whole, twelfth grade students used ECES less than any other group. The actual "low" users of the system are the black, non-college-bound females. One may assume that this group perceives less utility and relevance in ECES than any other group, perhaps because of ideas about marriage or immediate employment which minimize choice problems.

Interesting examples of student usage of ECES are provided by the observations recorded by the project staff member stationed at the field test site while

students were using the terminals. One tenth grade boy with a light academic load used the system for almost 30 sessions during the 11 weeks of the field trial. Several non-college-bound boys who approached the project with somewhat hostile adolescent bravado became interested after their first session on the system and, as the statistics show, became some of the most frequent users of ECES. Some students, especially the twelfth graders who had already applied to colleges and who had already made definite occupational choices, used the system two or three times and chose to terminate at that point. Their use of the system usually involved confirmation of their abilities, interests, and occupational choices, as well as an overview of typical courses included in specific college majors. On the other hand, other college-bound students discovered, after looking at courses and requirements for previously considered major courses of study, that their original choices were not as attractive as new majors they explored.

Of particular interest was the evidence of some students' seemingly unrealistic occupational explorations during the first sessions on ECES. Students with low tested ability and academic grades often explored occupations requiring considerable amounts of higher education, such as physician, lawyer, architect, engineer. Although their summary charts pointed out the discrepancy between ability and requirements, they were able to explore these prestige occupations at will.

Other interesting observations were made of the students who under-estimated their abilities and initially chose to explore low-level occupations rather than those more appropriate for their ability level. Just as the summary chart pointed out discrepancies for the low-ability students exploring occupations with high-ability requirements, the under-estimating student was advised that the ability required by the occupation he was exploring was lower than his own ability level indicated. These students tended to adjust their explorations to more compatible levels.

The "glamor" occupations of model and actress were often explored by females who showed some embarrassment if an observer happened to enter the laboratory carrel during such an exploration. The system thus allowed free-wheeling explorations without the addition of human evaluation or bias and gave each student the opportunity to investigate fantasy preferences if he or she desired.

It should be noted that, while the observers' inpressions lend substance to statistics, they cannot claim to establish definite trends among subjects. Therefore, by using the observations as starting points, careful analysis of patterns of usage must be made when the ECES usage-tracer data are available and, in future studies, when larger numbers permit.

Data Gathered During Field Trial

The procedures and instruments used in the field trial provided a wealth of data on various aspects of the system and its use. The data fell into several categories, as follows:

1. From Experimental and Control Groups prior to Use of System:

   School Grades and Grade-Point Average;

   Student Questionnaire, covering attitudes toward school, occupational plans, post-high school plans, sources of help, occupational information, vocational guidance,socioeconomic level of family, and the following instruments: Rotter Internalism-Externalism Scale, Work Values Inventory (Super), and the Occupational Trait List, Kuder Preference Record (Form E), Holland Vocational Preference Inventory.

2. From Experimental and Control Groups at the Conclusion of the Field Trial:

   Post-Trial Student Questionnaire including:

   Part 1 - consisting of 150 items taken from the Pre-Test Student Questionnaire;

   Part 2 - repeat testing of the Occupational Trait List, Rotter

Internalism-Externalism Scale, and Work Values Inventory.

3. From Experimental Group Only:

   Student Reaction Form - filled out after each session on the system and dealing with attitudes toward the system and help received, progress in future planning, etc.

   Part 3 - Student Questionnaire (Post-Test) - dealing with attitudes toward the total experience on the system, help received, suggestions for use, etc.

4. From Counseling Staff at School:

   Counselor Questionnaire - covering attitudes toward students' occupational planning;

   Counselor Interaction Log - covering their contacts with the students in the study;

   Group Interviews - at the conclusion of the field trial.

5. From Parents:

   Parent Questionnaire - covering attitudes of the parents of the experimental group toward ECES.

6. From Teachers and Other School Staff:

   Teacher Questionnaire - designed to obtain teachers evaluations of the effects of ECES on the students.

Some of the above data were used primarily for description of the subjects and the process, others were used to investigate probable effects of use of ECES by the experimental group.

The following section describes the procedures used in the analysis of the data.

Types of Analyses of Data

As indicated in the beginning of this chapter, one of the objectives of the

field trial was to ascertain whether the control and experimental groups exhibited different amounts of change on dimensions such as vocational and educational planning maturity, amount of decision-making information, knowledge of decision-making principles, and realism of expressed occupational preference. The data available for evaluation consisted of pre- and post-trial responses to the rather extensive Student Questionnaire which had been administered to both experimental and control groups.

While analyses of questionnaire responses by means of non-parametric methods applied to individual items was feasible and was later done to supplement other analyses, the use of parametric methods on scales measuring vocational development constructed from items in the questionnaire was deemed the more desirable procedure. Such scales would provide continuous measures of these important constructs and thus make it possible to evaluate interactions as well as to control for differences in initial status through covariance analysis.

The first step in the development of such scales was to categorize each questionnaire item (Post-Questionnaire, Part 1) on the basis of the dimension it measured. This was done independently by three members of the Teachers College evaluation group and differences in classification were discussed to reach consensus. The results of this classification are given in Table III-4. Note that many of the items were classified as "other"; these were analyzed individually.

(Insert Table III-4 about here)

Each of the lists of items classified as measuring maturity, knowledge of decision-making principles, and knowledge of decision-making information was inspected to determine how items could be combined to form a scale. Several items were eliminated because: (1) scoring was incompatible with other items in the group or (2) it was not clear how the item should be scored to provide a measure of the construct involved.

Table III-4. Post-Trial Questionnaire (Part I) Items Classified as Measures of Various Vocational Developmental Characteristics

Vocational Developmental Characteristic	Item Numbers
Vocational and Educational Planning Maturity	46,59-81,112-123,131-132,149
Knowledge of Decision-Making Principles	44,124-130,143,144,146-148
Knowledge of Decision-Making Information	11-25,27-41,43,47-59
Realism of Vocational Self Concept	Congruence between 4 and 5, 6 and 7, 8 and 9
Achievement Motivation	1
Educational Aspiration	2,4
Vocational Aspiration	3,6,8
Other	42,45,99,100,103-111,133-135,137,150

Table III-5. Description of Vocational Development Scales: Initial Version

Scale	Item Numbers*	Scoring	Possible Range of Scores
M. Vocational and Educational Planning Maturity	59-60 63-81 112-113 116-123	1-5 (5=high M)	31 to 156
DP. Knowledge of Decision-Making Principles	44 124-130 143-144 146-148	1 or 2=0, 3=1, 4 or 5=2 " " " T=0, ?=1, F=2 F=0, ?=1, T=2	0 to 26
DI1. Amount of Decision-Making Information (Job Information)	47-58	1-5 (5=high DI)	12 to 60
DI2. Amount of Decision-Making Information (Utility of Sources)	27-41	(1) Code sources as: 40-41=1 29-32=2 27-28=3 33-39=4 (2) For each item obtain product of source code and response code, i.e., 1-5. (3) Sum products over items.	44 to 220
DI3. Quality of Decision-Making Information	11-25	(1) Code sources as: 24-25=-2 11-12=+1 13-16=-1 17-23=+2 (2) Code responses as: 1=-2, 2=-1, 3=0, 4=+1, 5=+2 (3) For each item get product of source and response codes and sum over all items.	-48 to +48

*As numbered in Post-Trial Questionnaire, Part 1.

The vocational development scales as initially constructed are shown in Table III-5 and consisted of:

1. Vocational and Educational Planning Maturity (M), 31 items;
2. Knowledge of Decision-Making Principles (DP), 13 items;
3. Amount of Decision-Making Information #1 (DI1), 12 items;
4. Amount of Decision-Making Information #2 (DI2), 15 items;
5. Quality of Decision-Making Information (DI3), 15 items.

Based on the pre-trial data, frequency distributions of each scale were obtained for both experimental and control groups, by grade, sex, race (white, black), and future plans (college, non-college). The distributions tended, in general, to be rectangular in form, were not badly skewed, and seemed satisfactory for use of the measures in parametric analyses.

(Insert Table III-5 about here)

Correlations were computed between each scale item and the total scale score. These suggested that some revision of the M and the DP scales was necessary (see Table III-6). Accordingly, items 74 through 81 from the M scale and items 143 through 148 from the DP scale were combined to form an additional scale measuring Responsibility for Decision-Making (RD). The revised scales are described in Table III-7. Average item-total correlations for all scales are shown in Table III-8.

(Insert Tables III-6, 7, and 8 about here)

Evidence of the validity of the vocational development scales was obtained by comparing means of pre-trial data for subgroups based on grade, race, future plans, and sex (see Table III-9). Inspection of Table III-9 shows that mean differences between subgroups, although usually not statistically significant, generally tended to be in the direction one would expect if the scales were functioning properly. For example, the results for Scale M show that, in terms of

Table III-6. Correlations between Individual Scale Items and Total Score: M and DP Scales

Scale	Item #	Correlation with Total	Item #	Correlation with Total
M	59	.46	76	.29
	60	.44	77	.37
	63	.27	78	.40
	64	.38	79	.23
	65	.49	80	.26
	66	.51	81	.65
	67	.62	112	.56
	68	.43	113	.41
	69	.57	116	.45
	70	.56	117	.63
	71	.53	118	.65
	72	.52	119	.54
	73	.39	120	.56
	74	.30	121	.47
	75	.29	122	.59
			123	.55
DP	44	.44	124	.70
	143	.17	125	.62
	144	.12	126	.72
	146	.25	127	.69
	147	.29	128	.67
	148	.15	129	.54
			130	.51

Table III-7. Description of Vocational Development Scales: Revised Version

Scale	Item Numbers*	Scoring	Possible Range of Scores
M. Vocational and Educational Planning Maturity	59-60 63-73 112-113 116-123	1-5 (5=high M)	23-115
DP. Knowledge of Decision-Making Principles	44 124-130	1-5 (5=high DP)	8-40
DI1. Amount of Decision-Making Information (Job Information)	47-58	1-5 (5=high DI1)	12-60
DI2. Amount of Decision-Making Information (Utility of Sources)	27-41	(1) Code sources as: 40-41=1, 29-32=2, 27-28=3, 33-39=4 (2) For each item obtain product of source code and response code, i.e., 1-5. (3) Sum products over items.	44 to 220
DI3. Quality of Decision-Making Information	11-25	(1) Code sources as: 24-25=-2 11-12=+1 13-16=-1 17-23=+2 (2) Code responses as: 1=-2, 2=-1, 3=0, 4=+1, 5=+2 (3) For each item get product of source and response codes. (4) Sum over items and add 48.	0 to 96
RD. Responsibility for Decision-Making	74-81 143-144 146-148	1-5 (5=high RD) T=1, ?=3, F=5 (5=high RD) F=1, ?=3, T=5 (5=high RD)	13 to 65

*As numbered in Post-Trial Questionnaire, Part 1.

Table III-8. Average Item-Total Score Correlations for Revised Vocational Development Scales, Experimental and Control Groups

Scale	Experimental Group Mean	Experimental Group Range	Control Group Mean	Control Group Range
M	.55	.30 - .70	.52	.25 - .63
DP	.69	.45 - .78	.68	.43 - .78
DI1	.55	.37 - .67	.47	.25 - .63
DI2	.54	.40 - .72	.59	.45 - .69
DI3	.78	.75 - .87	.80	.67 - .88
RD	.44	.11 - .58	.44	.20 - .64

mean levels of vocational and educational planning maturity, (1) twelfth graders were higher than ninth, tenth, and eleventh graders, (2) college-bound students were somewhat higher than non-college-bound, and (3) females were higher than males. Results are consistent for other scales in which similar differences would be expected.

(Insert Table III-9 about here)

Further evidence of scale validity came from factor analysis of a number of pre-trial variables including the six vocational development scales. The correlation matrix is presented in Table III-10 and the rotated factor matrix in Table III-11. The loadings on the eight factors rotated show that while there is overlapping among certain of the vocational development scales, particularly DI2, DP, and M (average correlation equals .50), these scales generally have little relation to others included in this analysis. This suggests that the six scales are measures of unique constructs and do not merely duplicate information from individual questionnaire items or measures of general academic aptitude.

(Insert Tables III-10 and 11 about here)

Data Analyses

Pre-trial data were analyzed to determine whether there were initial differences between experimental and control groups. The analyses at this stage consisted of chi-square statistics based on individual items in the pre-trial questionnaire.

To determine whether or not there were significant differences between experimental and control groups at the conclusion of the field trial, covariance analyses using pre-trial data as covariates were carried out on each of the following variables:

1. Planning Maturity (M)
2. Decision-Making Principles (DP)
3. Decision-Making Information #1 (DI1)

4. Decision-Making Information #2 (DI2)
5. Decision-Making Information #3 (DI3)
6. Responsibility for Decisions (RD)
7. Rotter Internalism
8. Work Values Inventory - Altruism
9. " " " Esthetics
10. " " " Creativity
11. " " " Intellectual Stimulation
12. " " " Independence
13. " " " Achievement
14. " " " Prestige
15. " " " Management
16. " " " Economic Returns
17. " " " Security
18. " " " Surroundings
19. " " " Supervisory Relations
20. " " " Associates
21. " " " Variety
22. " " " Way of Life
23. Discrepancy: Self, Best-liked Occupation (OTL)
24. " Self, Least-liked Occupation (")
25. " Self, Ideal Self (")
26. " Best-liked, Least-liked Occ. (")
27. " Best-liked, Ideal Self (")
28. " Least-liked, Ideal Self (")
29. " Least-liked, Holland Low (OTL, Holland)
30. " Best-liked, Holland High (" ")
31. Holland: Realistic
32. " Intellectual
33. " Social
34. " Conventional
35. " Enterprising
36. " Artistic
37. " Self-control
38. " Masculinity
39. " Status
40. " Infrequency
41. " Acquiescence

The use of the covariance method provided a statistical means of controlling for initial differences which may have been present and for increasing precision of the tests for post-trial differences.

Individual post-trial questionnaire items were analyzed by means of chi-square tests. These analyses were done to detect experimental-control differences in scale items which were not revealed by covariance analyses of the scales themselves. Also included were analyses of questionnaire items which were not part of the scales. The results of these analyses are presented in Chapter IV.

Table III-9. Scales Measuring Vocational Development

Vocational and Educational Planning Maturity (M)

Testing Period	Subgroup	Experimental Mean	Experimental SD	Experimental N	Control Mean	Control SD	Control N
Pre-	Grade 9	69.40	13.71	37	66.20	14.76	30
	10	66.17	11.50	29	68.88	13.64	34
	11	66.27	13.04	34	64.64	10.50	37
	12	70.55	12.57	27	70.96	12.49	30
	White	68.11	12.97	85	67.29	13.46	85
	Black	68.00	12.88	42	68.02	12.32	46
	Coll.	68.13	12.30	87	69.69	12.64	89
	N-Coll.	67.95	14.23	40	63.00	12.81	42
	Male	68.51	13.20	62	66.80	14.61	63
	Female	67.66	12.67	65	68.23	11.43	68
	Total	68.07	12.94	127	67.54	13.07	131
Post-	Grade 9	72.10	12.99	37	70.90	14.24	30
	10	69.41	14.29	29	73.58	15.22	34
	11	71.00	11.30	34	70.24	12.09	37
	12	76.37	13.66	27	76.50	11.12	30
	White	72.22	13.03	85	72.36	13.42	85
	Black	71.85	13.67	42	73.30	13.61	46
	Coll.	72.60	13.08	87	74.29	13.81	89
	N-Coll.	71.00	13.54	40	69.30	13.54	42
	Male	73.85	12.92	62	72.20	14.26	63
	Female	70.43	13.34	65	73.14	12.73	68
	Total	72.10	13.25	127	72.69	13.50	131
Knowledge of Decision-Making Principles (DP)							
Pre-	Grade 9	23.23	6.44	38	24.54	5.57	33
	10	20.91	5.96	35	24.85	6.24	35
	11	21.51	5.74	37	22.77	5.71	36
	12	24.18	6.35	27	23.65	5.92	32
	White	22.55	6.26	92	24.20	5.62	86
	Black	21.97	6.22	45	23.50	6.39	50
	Coll.	22.69	5.64	93	25.16	5.58	92
	N-Coll.	21.65	7.32	44	21.40	5.82	44
	Male	21.79	6.49	69	23.66	6.30	65
	Female	22.94	5.94	68	24.21	5.55	71
	Total	22.36	6.25	137	23.94	5.93	136
Post-	Grade 9	22.84	6.55	38	24.18	5.71	33
	10	21.34	6.59	35	24.94	5.05	35
	11	22.86	4.43	37	23.02	6.72	36
	12	25.00	5.64	27	25.06	4.25	32
	White	23.45	6.00	92	24.22	5.60	86
	Black	21.73	5.84	45	24.38	5.60	50
	Coll.	22.77	5.80	93	25.09	5.66	92
	N-Coll.	23.13	6.40	44	22.56	5.06	44
	Male	22.31	6.24	69	23.84	5.98	65
	Female	23.47	5.70	68	24.67	5.19	71
	Total	22.89	6.00	137	24.27	5.60	136

Table III-9 (cont.)

Amount of Decision-Making Information (DI1)

Testing Period	Subgroup	Experimental Mean	Experimental SD	Experimental N	Control Mean	Control SD	Control N
Pre-	Grade 9	33.62	10.72	37	34.96	9.07	28
	10	34.48	8.43	29	37.36	8.65	33
	11	36.21	7.10	32	34.62	10.30	29
	12	41.51	10.07	27	42.28	7.71	32
	White	36.71	9.44	84	36.83	9.91	78
	Black	35.12	10.12	41	38.54	8.47	44
	Coll.	35.87	10.10	87	36.86	9.88	84
	N-Coll.	36.92	8.66	38	38.73	8.30	38
	Male	37.49	9.38	61	38.08	9.68	56
	Female	34.95	9.84	64	36.90	9.22	66
	Total	36.19	9.70	125	37.45	9.45	122
Post-	Grade 9	43.18	9.46	37	38.14	10.37	28
	10	42.17	10.75	29	38.45	10.14	33
	11	43.31	6.79	32	36.68	8.40	29
	12	45.81	8.30	27	44.87	6.27	32
	White	44.86	8.45	84	39.39	9.76	78
	Black	40.85	9.58	41	40.09	8.91	44
	Coll.	43.96	8.53	87	39.33	9.96	84
	N-Coll.	42.60	10.02	38	40.34	8.24	38
	Male	43.55	9.27	61	40.94	9.27	56
	Female	43.54	8.80	64	38.54	9.50	66
	Total	43.55	9.03	125	39.64	9.47	122

Amount of Decision-Making Information (DI2)

Pre-	Grade 9	108.43	28.01	37	105.21	29.29	28
	10	96.86	30.86	30	110.48	50.49	35
	11	105.36	28.27	36	101.50	26.04	32
	12	124.35	23.37	27	113.53	29.80	32
	White	106.36	29.28	89	107.32	29.29	81
	Black	112.39	23.52	41	108.71	42.19	46
	Coll.	108.30	28.20	89	114.90	23.76	86
	N-Coll.	107.97	19.82	41	92.97	23.64	41
	Male	107.89	30.22	67	105.45	9.81	59
	Female	108.52	10.18	63	109.88	10.32	68
	Total	108.20	20.51	130	107.82	9.84	127
Post-	Grade 9	98.43	30.09	37	103.85	24.73	28
	10	101.13	31.71	30	110.94	32.67	35
	11	112.25	26.98	36	111.12	35.72	32
	12	120.88	30.23	27	123.50	20.98	32
	White	107.05	31.20	89	112.24	24.46	81
	Black	108.60	30.34	41	113.19	44.08	46
	Coll.	108.56	27.10	89	116.51	28.10	86
	N-Coll.	105.34	37.88	41	104.36	23.66	41
	Male	106.43	31.65	67	112.06	19.67	59
	Female	108.73	30.12	63	113.04	16.29	68
	Total	107.54	30.94	130	112.59	17.93	127

Table III-9 (cont.)

Quality of Decision-Making Information (DI3)

Testing Period	Subgroup	Experimental Mean	Experimental SD	Experimental N	Control Mean	Control SD	Control N
Pre-	Grade 9	61.79	12.70	39	63.17	10.10	35
	10	64.66	10.35	33	62.22	11.74	36
	11	65.58	10.28	36	65.88	10.92	36
	12	66.85	8.31	28	63.87	8.53	33
	White	64.94	10.25	90	65.40	10.30	90
	Black	63.73	11.92	46	60.90	10.29	50
	Coll.	65.60	10.24	93	65.74	9.51	95
	N-Coll.	62.23	11.78	43	59.66	11.31	45
	Male	62.40	10.35	67	64.77	10.31	68
	Female	66.60	10.60	69	62.86	10.63	72
	Total	64.53	10.86	136	63.79	10.52	140
Post-	Grade 9	61.94	9.15	39	62.28	9.42	35
	10	65.96	9.23	33	62.19	12.54	36
	11	63.22	8.92	36	65.22	11.16	36
	12	64.67	7.61	28	63.54	7.92	33
	White	63.96	8.49	90	65.14	10.64	90
	Black	63.54	9.78	46	60.02	9.49	50
	Coll.	64.78	8.40	93	64.85	9.37	95
	N-Coll.	61.74	9.70	43	60.06	12.00	45
	Male	63.11	8.24	67	63.20	11.34	68
	Female	64.50	9.54	69	63.41	9.71	72
	Total	63.82	8.95	136	63.31	10.33	140
Responsibility for Decision-Making (RD)							
Pre-	Grade 9	50.02	5.06	39	49.91	5.79	34
	10	50.41	6.54	34	50.27	7.03	36
	11	48.83	6.56	37	51.00	5.12	35
	12	52.53	7.14	28	53.09	6.89	32
	White	51.31	6.31	92	51.32	6.59	90
	Black	48.30	6.17	46	50.46	5.87	47
	Coll.	49.73	6.36	93	51.50	5.39	92
	N-Coll.	51.51	6.38	45	50.06	7.91	45
	Male	49.68	6.69	70	50.40	6.19	67
	Female	50.95	6.07	68	51.62	6.48	70
	Total	50.31	6.42	138	51.02	6.37	137
Post-	Grade 9	48.33	7.15	39	49.08	6.54	34
	10	51.05	9.08	34	50.72	6.83	36
	11	51.40	5.39	37	52.22	5.79	35
	12	52.03	9.49	28	54.90	7.19	32
	White	51.93	7.78	92	52.23	6.61	90
	Black	47.86	7.52	46	50.61	7.36	47
	Coll.	51.70	6.36	93	52.76	5.70	92
	N-Coll.	48.24	10.06	45	49.46	8.49	45
	Male	49.68	8.83	70	50.67	6.48	67
	Female	51.50	6.76	68	52.64	7.18	70
	Total	50.57	7.93	138	51.67	6.92	137

Table III-10. Correlations Among a Number of Pre-Trial Variables Including the Six Vocational Development Scales, Experimental Group (N=162)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 DI1	-																
2 DI2	08	-															
3 DI3	08	30	-														
4 Item 58*	11	28	76	-													
5 Item 152*	15	11	12	18	-												
6 Item 153*	04	01	-05	-06	28	-											
7 Item 153 minus Item 152	-07	-07	-13	-18	-41	76	-										
8 RD	20	22	23	13	07	12	06	-									
9 Rotter Internalism	17	01	08	11	14	-04	-13	04	-								
10 DAT-V	08	20	16	13	29	24	03	33	15	-							
11 DAT-M	14	08	09	01	27	27	07	29	21	66	-						
12 DAT-T	12	16	14	09	30	27	05	34	18	92	88	-					
13 DAT-Spatial	08	03	05	-02	22	22	06	21	20	58	51	62	-				
14 GPA (High School)	-02	10	07	08	32	19	-03	21	13	58	48	58	31	-			
15 M	16	49	34	31	28	10	-10	28	25	20	13	19	20	18	-		
16 Item 4* minus Item 5*	-06	07	08	00	03	12	09	-03	-05	05	-07	03	17	-05	03	-	
17 Item 6* minus Item 7*	03	-03	04	-05	-04	-11	-07	03	-06	-04	-08	-07	-10	-14	-07	18	-
18 DP	09	36	25	28	28	10	-10	28	24	34	26	34	19	31	66	-10	03

*As numbered in Post-Trial Questionnaire, Part 1.

Table III-11. Varimax Factor Matrix Based on Analysis of Pre-Trial Data in Table III-10**

Variable	1	2	3	4	5	6	7	8
1 DI1					.89			
2 DI2				.38			.63	
3 DI3				.92				
4 Item 58*				.92				
5 Item 152*			.33					.85
6 Item 153*		.92						
7 Item 153 minus Item 152		.93						
8 RD			.36		.34		.34	-.35
9 Rotter Internalism						.80		
10 DAT-V			.90					
11 DAT-M			.84					
12 DAT-T			.96					
13 DAT-Spatial			.69					
14 GPA (High School)			.68					
15 M				.35		-.34	.72	
16 Item 4* minus Item 5*	.86							
17 Item 6* minus Item 7*	.60							
18 DP			.31				.72	

*As numbered in Post-Trial Questionnaire, Part 1.

**Loadings less than .30 are not reported.

Chapter IV

RESULTS: EFFECTS OF ECES USAGE ON STUDENT VOCATIONAL DEVELOPMENT

This chapter is concerned primarily with the effects of ECES on the vocational development of students as assessed by means of the pre- and post-trial measures discussed in Chapter III. First, the initial (pre-trial) status of the experimental and control groups is considered in order to establish the equivalence of these groups prior to the ECES treatment. Then the analyses of the post-trial data are discussed, both in terms of the covariance analyses comparing experimental and control groups as described in Chapter III and on an individual item basis. Post-trial differences on the Work Values Inventory, the Holland Vocational Preference Inventory and measures of Realism of Vocational Choice derived from the Occupational Trait List are also presented. Finally, some comparisons are made between certain subgroups of the experimental and control subjects, the grouping being based on such dimensions as aptitude levels, occupational interest patterns, Rotter Internalism scores, realism of self-concept, and socioeconomic status. Attitudes toward ECES by students, counselors, teachers, and parents are considered in Chapter V.

Initial Status of Experimental and Control Groups

As indicated in Chapter III, the initial assignment of subjects to experimental or control conditions was completely random. Subsequently, however, several changes in the makeup of the groups were required, most of them for purely administrative reasons. In the judgment of the Teachers College evaluation group, these changes introduced no bias which would favor either the experimental or control groups. Nevertheless, it was deemed necessary either to demonstrate equivalence or to control statistically for possible non-equivalence. Actually, both of these measures were taken, the former to make it possible to

analyze individual item post-trial data without controlling for initial status, and the latter to increase precision of analysis of the vocational development scales.

Frequency distributions of responses to all pre-trial questionnaire items were obtained for the total experimental and control groups as well as for subgroups formed on the basis of grade, race, future educational or vocational plans, and sex. These permitted overall comparisons of control and experimental group distributions as well as comparisons within various categories (e.g., ninth grade, tenth grade, black, male, etc.). Rather than a routine analysis of all possible comparisons, each distribution was inspected and chi-square tests were performed when it appeared that differences might approach significance. Although different patterns of responses sometimes occurred, particularly within subgroups, the number of significant differences was far fewer than that which might have been expected on the basis of chance. Furthermore, the occurrence of differences appeared to be randomly distributed over subgroups. It was concluded, therefore, that experimental and control groups could be considered initially equivalent in terms of the dimensions measured by the pre-trial questionnaire. The results of the analyses of the pre-trial questionnaire data are found in Appendix H.*

The pre-trial data on the Differential Aptitude Test provide further evidence of the initial equivalence of experimental and control groups. Means and standard deviations on the Verbal, Numerical and Total Scores for experimental and control groups are given in Table IV-1. These data show that the groups differed only slightly in terms of general scholastic aptitude. Pre-trial data on the Rotter Internalism scale, the Holland Vocational Preference Inventory, the Work Values Inventory, and certain scales derived from the Occupational Trait List are given in Appendix H. Initial differences on these variables were also

*Appendices H, I, and J are not included in this report, but may be referred to in the ECES Project files.

relatively small and statistical controls for such differences were employed in the analyses of post-trial data.

Table IV-1. Means and Standard Deviations of Control and Experimental Groups on Differential Aptitude Test

	Experimental			Control		
Scale	N	Mean	SD	N	Mean	SD
DAT-Verbal	140	27.63	10.30	149	27.30	10.48
DAT-Numerical	140	22.16	8.21	149	22.64	9.39
DAT-Total	140	49.68	17.51	149	50.07	18.99

As indicated in Chapter III, the analyses of post-trial data consisted of covariance analyses of continuous data and chi-square analyses of post-trial responses to individual questionnaire items. Two designs were employed for the covariance analyses. Design One was a 2x2x2x2x2 in which the five independent dichotomous variables were:

1. Grade: Ninth and Tenth vs. Eleventh and Twelfth;
2. Race: White vs. Black;
3. Future plans: College vs. Non-college;
4. Sex: Male vs. Female;
5. Treatment: Experimental vs. Control.

In this design it was necessary to combine ninth and tenth grades and eleventh and twelfth grades in order to achieve sufficient numbers of subjects in each of the 32 subgroups involved in the analysis.

Design Two was a 4x2x2x2 in which the four independent variables were:

1. Grade: Ninth vs. Tenth vs. Eleventh vs. Twelfth;
2. Future plans: College vs. Non-college;
3. Sex: Male vs. Female;
4. Treatment: Experimental vs. Control.

Note that in Design Two white and black categories were combined in order to permit analysis by individual grade. Both Design One and Design Two were analyzed using the BMD-05V (general linear hypothesis model) computer program. Each of the continuous variables listed in Chapter III, pages III-23 and 24, was analyzed using both designs. Because of the large number of significance tests employed in the study (a total of over 4000, not all independent), the significance level adopted was .005.

It should be pointed out that the number of subjects involved in the analyses discussed in this chapter varies somewhat from variable to variable. This variation in both subgroup and total frequencies arose because complete data were not available on all experimental and control subjects. Lack of completeness was due principally to: (1) absence during testing sessions and (2) omission of one or more items in the pre- or post-trial questionnaires.* In the analysis of each variable or item, all available subjects were used.

Results

Vocational Development Scales

The six vocational development scales derived from the student questionnaire were:

1. Vocational and Educational Planning Maturity (M);
2. Knowledge of Decision-Making Principles (DP);
3. Amount of Decision-Making Information, #1 (DI1);
4. Amount of Decision-Making Information, #2 (DI2);
5. Quality of Decision-Making Information (DI3);
6. Acceptance of Responsibility for Decisions (RD).

*To reduce the number of missing data caused by failure to answer individual items, a scale score (i.e., M, DP, DI1, DI2, DI3, and RD) was computed for all subjects who answered at least 75% of the items in the scale. The score was adjusted on the basis of the proportion of items answered. For example, if a student answered only 10 of 12 items, his score would be his mean on the 10 items multiplied by 12, i.e., $(X_{10}/10)12$.

Means and standard deviations on post-trial data and means on pre-trial data for the Design One and Design Two analyses of these variables are given in Appendix I. Tabular presentation of such results is included in the text only for variables on which significant differences occurred.

It was hypothesized that means for the experimental groups would be greater than those for controls on all of the vocational development variables. In general, this hypothesis was not supported. The only significant difference found between experimental and control groups was on the DI1 scale which measured how much specific knowledge the student thought he had concerning certain aspects of occupations. As shown in Table IV-2, the experimental group post-trial mean was 43.55 while for the controls it was 39.64. The difference, when adjusted for pre-trial differences, was significant at the .005 level. For a comparison of control and experimental group means within subgroups, see Table III-9 in Chapter III.

Table IV-2. Pre- and Post-Trial Means for Experimental and Control Subjects on DI1 Scale

Group	N	Pre-Trial Mean	Post-Trial Mean	SD	F
Experimental	125	36.19	43.55	9.03	10.59*
Control	122	37.45	39.64	9.47	

*With 1 and 214 d.f., significant at .005 level.

Other significant differences on the vocational development scales were found on (1) DI2, which measured the amount of useful vocational and educational information the student had obtained from several sources (e.g., father, teacher, counselor), and (2) RD, which measured the students' acceptance of responsibility for making vocational and educational decisions. Table IV-3 shows that the amount of useful educational and vocational information which students felt they

had was dependent on grade level, with twelfth graders having the largest post-trial mean and ninth graders the smallest. The results in Table IV-4 suggest that college-bound students assume a greater degree of responsibility for making educational and vocational decisions than do non-college. Note that there were no significant experimental-control differences on either DI1 or RD.

Table IV-3. Pre- and Post-Trial Means on DI2 Scale, by Grade

Grade	N	Pre-Trial Mean	Post-Trial Mean	SD	F
9	65	107.04	100.76	27.77	4.80*
10	65	104.19	106.41	32.24	
11	68	103.54	111.72	31.09	
12	59	118.56	122.30	25.21	

*With 3 and 225 d.f., significant at .005 level.

Table IV-4. Pre- and Post-Trial Means for College and Non-College Students on RD Scale

Group	N	Pre-Trial Mean	Post-Trial Mean	SD	F
College	185	50.61	52.23	6.05	18.39*
Non-College	90	50.78	48.85	9.3	

*With 1 and 242 d.f., significant at .0005 level.

As would be expected, analyses of individual items making up the DI1 scale are consistent with the finding of an experimental-control difference on the scale itself. Significant differences were found on seven of the twelve scale items, all in favor of the experimental students. Differences in response patterns between experimental and control students were also found on several items comprising the M, DP, DI1, and DI2 scales. However, these differences tended to occur within subgroups rather than between total experimental and control groups, and generally favored the control students. The results are

summarized in Table IV-5. Frequency distributions of post-trial responses to all questionnaire items are found in Appendix A.

Table IV-5. Differences Between Experimental and Control Subjects on Individual Questionnaire Items Making Up the Vocational Development Scales

Scale	Item*	Group	Difference in Favor of:	Significance Level**
M	64	Total	C	.005
		White	C	.01
		College	C	.005
		Female	C	.005
	71	Female	C	.005
	122	Total	C	.005
	123	Ninth	C	.005
DP	127	Total	C	.005
	128	Tenth	C	.005
		Black	C	.005
DI1	47	Eleventh	E	.005
	50	Total	E	.01
		White	E	.005
	51	Total	E	.005
		White	E	.005
	54	White	E	.01
	55	Total	E	.005
		White	E	.005
		College	E	.005
		Male	E	.005
		Female	E	.005
	56	Total	E	.005
		White	E	.005
		College	E	.01
	58	White	E	.005
DI2	28	Non-College	C	.005
	36	Tenth	C	.005
	37	Total	E	.005
	38	Total	C	.005
		Tenth	C	.005
		White	C	.005
		Male	C	.005
	39	Total	C	.005
		Non-College	C	.005

*Post-trial questionnaire item numbers.

**All based on 2xk chi-square tests.

Realism of Vocational and Educational Self Concept

It was hypothesized that the experimental subjects would tend to develop more realistic vocational and educational self concepts than their control counterparts. Several measures of this construct were derived from discrepancy scores based on the Occupational Trait List administered on a pre-trial and post-trial basis. These measures consisted of discrepancy scores between:

1. Self and Best-liked occupation;
2. Self and Least-liked occupation;
3. Self and Ideal self;
4. Best-liked and Least-liked occupations;
5. Ideal-self and Best-liked occupation;
6. Ideal-self and Least-liked occupation.

Covariance analyses of these scores using the pre-trial measure as covariate revealed no significant differences between experimental and control groups nor between any other subgroups based on race, future plans, sex, and grade level. Subgroups means on these scores are given in Appendix I.

As indicated in Table III-4 of Chapter III, discrepancy scores between Items 4 and 5, 6 and 7 (boys), and 8 and 9 (girls) were used as measures of realism of educational and vocational choices. Mean discrepancy scores on these measures showed no significant differences between experimental and control groups. Between items 4 (educational aspiration) and 5 (expected educational attainment) the mean discrepancy scores were .40 for both experimental and control groups. Among boys, the mean discrepancies between Items 6 (vocational aspiration) and 7 (expected level of vocational attainment) were .67 for experimentals (n=63) and .90 for controls (n=67). For girls the analogous figures (based on Items 8 and 9) were .18 and .00 for experimentals (n=49) and controls (n=62), respectively. These figures clearly indicate that differences between

experimental and control subjects on these measures are negligible. The complete analyses of these measures by subgroups may be found in Appendix J.

Rotter Internalism-Externalism

No formal hypotheses were advanced concerning differential treatment effects on the Rotter Internalism-Externalism Scale. One might speculate that the ECES system would tend to reduce students' dependence on external sources for vocational and educational information. On the other hand one might reason that the system would encourage greater dependence on the counselor for interpretation of the presumably larger amount of information made available through ECES.

The covariance analyses of pre-trial and post-trial Rotter Internalism scores revealed no significant differences between experimental and control groups. Means and standard deviations on this measure are given in Appendix I.

Work Values Inventory

The ECES system was designed to provide the student with relevant appropriate educational and vocational information rather than to change his attitudes concerning sources of job satisfaction. Consequently, no hypotheses were advanced concerning the possible effects of the system on the 15 scales of the Work Values Inventory.

Significant differences on four of the scales resulted from covariance analyses of the pre-trial and post-trial data. Inspection of Table IV-6 reveals that non-college-bound students regarded work Surroundings as significantly more important than did college-bound students. Table IV-7 shows a significant interaction between treatment and grade level on Job Prestige. Mean scores for experimental subjects tended to decrease from pre- to post-trial periods in the ninth, tenth, and eleventh grades, but increased in the twelfth grade. Control subjects, on the other hand, showed increases in grades nine and eleven and

decreases in grades ten and twelve.

Table IV-6. Pre- and Post-Trial Means of College and Non-College Students on Work Surroundings Scale of Work Values Inventory

Group	N	Pre-Trial Mean	Post-Trial Mean	F
College	187	11.79	11.38	11.75*
Non-College	91	12.16	12.42	

*With 1 and 245 d.f., significant at .001 level.

Table IV-7. Pre- and Post-Trial Means* of Experimental and Control Subjects on Job Prestige Scale of Work Values Inventory, by Grade

	Experimental			Control		
		Pre-Trial	Post-Trial		Pre-Trial	Post-Trial
Grade	N	Mean	Mean	N	Mean	Mean
9	37	11.54	11.35	35	10.92	11.37
10	34	12.00	11.97	37	11.49	11.11
11	36	10.78	10.64	37	11.54	12.11
12	29	11.14	11.72	33	11.61	11.42

*Treatment by Grade Interaction, significant at .005 level. F=4.75 with 3 and 245 d.f.

Significant interactions were also found on the Work Values Economic Returns and Variety. The data in Table IV-8 reveal that, among the experimental groups, college-bound students showed a pre-trial to post-trial decrease in the importance they attached to Economic Returns while non-college-bound students increased by approximately an equal amount. For control subjects, college-bound students remained about the same from pre- to post-trial periods but the non-college-bound students decreased markedly. In terms of Variety, the results are somewhat more complicated, as seen in Table IV-9. Among college-bound students, male experimentals showed little change from pre- to post-trial while male controls showed an increase; female experimentals, however, increased while controls

showed little change. Nearly the opposite pattern holds among non-college-bound students, with experimental males and control females increasing and control males and experimental females decreasing or showing no change.

Table IV-8. Pre- and Post-Trial Means* of Experimental and Control Students on Economic Returns Scale of Work Values Inventory, by College-Non-College

		Experimental			Control	
		Pre-Trial	Post-Trial		Pre-Trial	Post-Trial
Group	N	Mean	Mean	N	Mean	Mean
College	91	12.19	11.72	96	12.02	12.07
Non-College	45	12.47	13.02	46	12.85	11.80

*Treatment by Future Plans Interaction, significant at .001 level. F=11.73 with 1 and 245 d.f.

Table IV-9. Pre- and Post-Trial Means* of Experimental and Control Students on Variety Scale of Work Values Inventory, by Sex and College-Non-College

			Experimental			Control	
			Pre-Trial	Post-Trial		Pre-Trial	Post-Trial
Group	Sex	N	Mean	Mean	N	Mean	Mean
College	M	43	10.86	10.79	47	10.92	11.57
	F	48	10.85	11.50	49	12.16	12.06
Non-College	M	25	11.40	12.20	22	10.77	10.59
	F	20	11.50	10.65	24	10.87	11.54

*Treatment by Sex by Future Plans Interaction, significant at .0005 level. F=13.12 with 1 and 245 d.f.

In the absence of hypotheses these results are extremely difficult to interpret. While on a post hoc basis one could develop a rationale for each, it seems doubtful that the observed differences would hold up under replication. Therefore, these results seem to say little about the possible effects of ECES. Rather they are suggestive of the kinds of effects which the system might produce and indicate interesting hypotheses to be tested in future experiments. Means and standard deviations on all scales of the Work Values Inventory may be found in Appendix I.

Holland Vocational Preference Inventory

No hypotheses were advanced concerning the effects of ECES on the six vocational preference scales of the Holland Vocational Preference Inventory. The ECES system was not designed to change in any general systematic way the vocational preferences of students. Rather, its intent was to provide information upon which the individual student could base a mature and realistic vocational and/or educational decision.

Significant differences involving treatment effects appeared on three of the six vocational preference scales, namely, Realistic, Conventional, and Enterprising. In each case, the difference appeared in the form of a significant treatment by grade interaction. Since the pattern of mean responses among treatment-grade groups was essentially the same on all three of these scales, the results are presented in a single table.

Table IV-10 shows that changes from pre-trial to post-trial means are similar in experimental and control groups in grades nine, eleven, and twelve on all three scales. The significant interactions clearly arise from a marked difference between the two treatment groups among tenth grade students. Experimentals show a marked decrease while controls show a marked increase in means from pre- to post-trial periods. In the absence of hypotheses, this difference should be interpreted with caution. It should be noted, however, that the vocational preferences measured by these three scales could all be classed as "practical", compared with the more abstract dimensions characterizing the remaining three scales, which are Intellectual, Social, and Artistic. One might reason, therefore, that tenth graders were influenced by exposure to ECES to move away from the relatively "practical" preferences expressed at the pre-trial period, thus broadening the number and types of vocational alternatives considered. This

trend appeared to be reversed in the twelfth grade where narrowing of alternatives and an increasing interest in the Realistic, Conventional, and Enterprising areas took place. It should be emphasized that this rationale is only one of several possible, and that it cannot be confirmed on the basis of the data available in this study.

Table IV-10. Pre- and Post-Trial Means* for Experimental and Control Groups on Realistic, Conventional, and Enterprising Scales of Holland Vocational Preference Inventory, by Grade

		Experimental			Control	
			Pre-Trial	Post-Trial		Pre-Trial	Post-Trial
Scale	Grade	N	Mean	Mean	N	Mean	Mean
Realistic	9	39	2.13	2.49	36	2.03	2.17
	10	35	1.28	.77	41	.83	2.29
	11	37	1.89	2.30	39	.90	1.20
	12	28	.93	2.64	35	1.74	2.66
Conventional	9	39	2.02	2.28	36	2.75	2.47
	10	35	1.40	.89	41	.76	1.95
	11	37	2.35	1.43	39	1.82	1.87
	12	28	1.18	2.43	35	1.66	2.09
Enterprising	9	39	2.49	2.90	36	2.73	2.39
	10	35	2.03	1.31	41	1.20	2.76
	11	37	2.76	2.35	39	2.10	2.26
	12	28	1.50	3.36	35	2.51	3.11

*For each scale, there was a significant treatment by grade interaction:
for Realistic, F=4.77, 3 and 257 d.f., significant at .005;
for Conventional, F=5.20, 3 and 257 d.f., significant at .005;
for Enterprising, F=5.99, 3 and 257 d.f., significant at .001.

Analyses of Individual Questionnaire Items

As indicated in Chapter III, each item in the pre-trial and post-trial student questionnaires was analyzed individually regardless of whether it was included in one of the vocational development scales. Items in Part 1 of the post-trial questionnaire were classified as measures of several vocational development characteristics as described in Table III-4. In this section

results of the analysis of items classified as measuring achievement motivation, educational aspiration, vocational aspiration, evaluation of the school guidance program, and of those classified as "other" will be discussed.

There were no significant differences on the post-trial Student Questionnaire, Part 1, between experimental and control students on any of the items which measured achievement motivation (Item 1), educational aspiration (Items 2 and 4), and vocational aspiration (Items 3, 6, and 8), nor on any of the items (82 through 98) in which students were asked to evaluate the school's guidance program. Among items classified as "other", a significant difference between experimental and control groups appeared only on Item 105, which asked students to indicate the extent to which school counselors were helping them in planning and decision-making for their careers. As shown in Table IV-11, tenth grade experimental subjects thought they were getting more help from counselors than did tenth grade controls. The chi-square of 17.98 (3 degrees of freedom) was significant at the .005 level.

Table IV-11. Distributions of Experimental and Control Tenth Grade Students' Responses to Item No. 105, Part 1, Post-Trial Questionnaire

Item 105: Indicate the extent to which your school counselors are helping you in your planning and decision-making for your career.

Amount of Help	Experimental	Control
Not helping.	9	19
Helping, but only to a small degree.	3	14
Helping somewhat.	12	3
Helping a lot or helping very much.	11	5
Total	35	41

Chi-square = 17.98, 3 d.f., significant at .005.

Concluding Statement

It should be noted that the analyses of results presented in this chapter have consistently focused on differences between experimental and control students, i.e., on the possible differential effects of the treatments on the student characteristics considered. On the basis of these analyses, one must conclude that in the relatively short period of exposure to ECES during the field trial, the difference in effect was minimal. However, there is a large amount of potentially valuable information present in the data, quite apart from that concerning treatment effects. For example, differences between college-bound and non-college-bound students, between males and females, and between students of different grade levels may exist. It is suggested that further analyses be carried out to investigate these as well as other possible differences between subgroups of students involved in the study.

Chapter V

RESULTS: ATTITUDES TOWARD ECES

Student Attitudes

At the end of the 11 weeks of the field trial, the experimental subjects were asked to complete a special questionnaire designed to survey their attitudes toward their experience with ECES, and their evaluation of its impact, if any, on their own lives. Student Questionnaire, Part 3, contained questions concerning their general reaction to ECES, their evaluation of how the system could best be used, and whether their experience had affected their career planning, both in regard to educational and occupational alternatives and to increased awareness of their own abilities and interests. The responses to these items were analyzed by students' ethnic background, grade level, sex, and future educational plans.

The size of the experimental sample was limited to those subjects completing all the post-trial questionnaires. This resulted in a sample size of 140 subjects, as contrasted with the total of 156 subjects on whom the statistics of student usage of ECES were compiled. The 16 subjects who used the system, but failed to complete their post-trial questionnaires, were predominantly black, non-college-bound students. Although there was no difference in numbers of males and females who did not provide post-trial data, there was a difference in grade level, with upperclassmen accounting for 62% of the non-responding group. However, the loss of these 16 cases does not affect meaningful comparisons of responses between grade levels, ethnic background, sex, and future educational plans for the remainder of the students who used ECES during the field trial. Frequency distributions of responses to all the items in the special questionnaire for the experimental subjects are contained in Appendix B. Significant differences are included in Tables V-1 to V-5 and discussed below.

General reaction to ECES was, on the whole, favorable. When asked for their

overall reaction to ECES, the majority of the experimental subjects indicated that they liked the system and thought that other students who used the system shared their evaluation (Questions 1 and 12). They also agreed that ECES could benefit most students, regardless of whether those students planned to go to work directly after high school or to continue their education at the vocational training or college levels (Questions 9 and 11). The majority of students also agreed that the system had lived up to their expectations to either a "pretty good" or "a great" extent (Question 38). There were no significant differences between student subgroups in these general evaluations.

However, some interesting group differences did emerge on questions designed to assess whether the students felt that ECES was playing a directive role in their explorations on the system (Table V-1). When asked whether they felt that their future was being decided for them, the students as a whole disagreed. However, the eleventh grade students were less uniform in their evaluation of the system's "directiveness" than were the twelfth graders, with more eleventh grade than twelfth grade students indicating that they felt the system was somehow deciding their fate (Table V-1, Question 86). Comparisons at the other grade levels were not significant. This difference is difficult to explain, although one may postulate that eleventh grade students may perceive themselves to be under more pressure to make educational or occupational choices than the underclassmen, who have two more years to decide, or than the twelfth grade students who most likely have already made their post-high school decisions.

(Insert Table V-1 about here)

When asked if they felt that ECES had tried to choose an occupation for them, the students again disagreed as a group. However, 44% of the black students, compared with 21% of the white students, felt the system had tried to choose an occupation for them (Table V-2, Question 87). This ethnic difference

Table V-1. Differences in Experimental Subjects' General Reactions to ECES

Question

86 - I felt that my future was being decided for me.

	11	12
1. Strongly disagree.	16	21
2. Mildly disagree.	7	2
3. Mildly agree.	10	2
4. Strongly agree.	4	2
- No response	0	1

Chi Square	df	Significance Level
8.19	2	.05

87 - I felt that ECES tried to choose an occupation for me.

	W	B
1. Strongly disagree.	59	18
2. Mildly disagree.	16	6
3. Mildly agree.	12	10
4. Strongly agree.	8	10
- No response	0	1

Chi Square	df	Significance Level
8.71	3	.05

88 - I feel that ECES tried to choose a major for me.

	C	N-C
1. Strongly disagree.	60	21
2. Mildly disagree.	15	5
3. Mildly agree.	13	11
4. Strongly agree.	5	8
- No response	2	0

Chi Square	df	Significance Level
9.46	3	.05

may be a result of white students being provided with more occupational information and alternatives in their family contacts than the black students. It may also be that the black student is less accustomed to evaluating his own reactions to, and preferences for, occupations, and, therefore, reacts to this procedure in the system as a new experience, or one which is forcing unaccustomed evaluations. This might have been interpreted as "deciding one's future".

Although the majority of the total experimental subjects did not feel that ECES had tried to choose a major for them, the non-college-bound group did differ from the college-bound group (Table V-1, Question 88). Only 19% of the college-bound group felt that ECES had attempted to direct them toward a major, while 42% of the non-college-bound students indicated that the system had seemed directive in this way. This difference can be explained in much the same manner as the difference between white and black students in relation to occupational choice. The college-bound would have considered majors as part of their post-high school plans, while those not anticipating further education would not have actively considered the selection of a major and could, therefore, react to the evaluation of possible majors during their use of the system as representing direction toward choice of a major.

Student reports of the impact of ECES reveal interesting agreements and disagreements among groups as to how their experiences with ECES have affected their career planning. There were no significant differences of opinion between groups in regard to the status of their career plans before and after using ECES, and in whether their career plans have changed, or will change, as a result of their explorations on the system. Over half of the students indicated that they considered themselves to have been either "somewhat uncertain" about their career plans or "rather definite" about them before using the system (Question 16). As a result of using ECES, almost 80% of the students felt that they either remained

"somewhat uncertain", or became "rather definite", about their career plans, with the latter choice accounting for over half of all students' responses (Question 18). About 40% of the students felt that their plans had changed as a result of their use of ECES, and only 26% thought that their career plans would change in the future as a result of having used ECES (Questions 17 and 19). Most students reported that they had explored between one and three new occupations on ECES, and either "not any" or from "one to three" new majors (Questions 22 and 24). When asked whether they had "learned something from ECES about factors that are important to consider when making decisions about what to do after high school", the majority of the students replied that they had learned either "only a little" or "quite a lot", as contrasted with "nothing" or "a great deal" (Question 26).

When asked the general question of how they felt ECES has affected their plans for the future, 64% of the students said they were more definite about their plans (Question 20). The effect seemed particularly strong among the ninth grade students. (Table V-2, Question 20). There were no differences among any of the other subgroups on this question. There does not seem to be a ready explanation for this difference between the ninth and eleventh grade students unless one considers the possibility that the eleventh graders were originally more advanced in their planning than the ninth graders, and, therefore, did not feel that ECES had affected their plans. This rationale, however, would predict a difference between the ninth and twelfth graders. No such difference appeared.

(Insert Table V-2 about here)

The students were asked how ECES had affected the number of alternatives they were considering for their future. Half of the students said they have more alternatives since using ECES (Question 21). The only subgroup difference which appeared was between the eleventh and twelfth grade students, with the eleventh graders stating a greater widening of alternatives than did the twelfth graders (Table V-2, Question 21).

Table V-2. Differences in Students' Reports of the Impact of ECES

Question

20 - How has ECES affected your plans for the future?

	9	11
1. I am much more confused than when I started.	0	1
2. I am somewhat more confused than when I started.	1	4
3. I am about the same as when I started.	8	12
4. I am somewhat more definite than when I started.	20	16
5. I am much more definite than when I started.	11	4

Chi Square	df	Significance Level
4.72	1	.05

21 - How has ECES affected the number of alternatives you were considering for your future?

	11	12
1. I have a great many more alternatives now than before.	8	7
2. I have a few more alternatives now than before.	17	4
3. I have as many alternatives now as before.	5	11
4. I have fewer alternatives now than before.	6	4
5. I have far fewer alternatives now than before.	1	1
- No response	0	1

Chi Square	df	Significance Level
5.06	1	.05

In general, the students reported favorable impact of ECES. The impact appears to vary according to the amount and nature of career decision-making perceived to be relevant by students at each grade level and the degree to which such decisions were made prior to exposure to ECES.

Students' evaluation of the impact of ECES was assessed by a number of questions dealing with the extent to which ECES had been helpful to them in the areas of occupational and educational planning and alternatives, and in understanding their own strengths and weaknesses in relation to their occupational and educational goals. Interestingly, the students were more uniform in their evaluation of the impact of ECES when answering questions regarding occupational information and planning than when responding to similar questions regarding educational information and planning.

There were no group differences in students' responses to questions determining to what extent they thought ECES had been helpful in the area of occupational planning, and in the extent to which the system had made them more aware of possible occupational alternatives, and the important factors on which to base occupational decisions (Questions 40, 48, and 50). Nearly 75% of the students agreed that ECES had been helpful from "an average" to "a great extent" in all these areas.

More ninth grade students reported that ECES had been of help to them than did twelfth graders in the extent to which the system helped them make better occupational decisions (Table V-3, Question 52). This difference in assessed impact is understandable in view of the probability that more high school seniors than freshmen would have made their occupational plans by the time of their first exposure to ECES.

(Insert Table V-3 about here)

Most students (Question 44) felt that ECES had been very helpful to them

Table V-3. Differences in Students' Evaluations of the Impact of ECES

Question

52 - To what extent has ECES helped you make better occupational decisions?

	9	12
1. Hardly at all.	1	9
2. To only some extent.	4	5
3. To an average extent.	10	4
4. To a pretty good extent.	13	5
5. To a great extent.	12	5

Chi Square	df	Significance Level
13.83	4	.01

44 - To what extent has ECES helped you understand how your strengths and weaknesses fit in with your occupational goals?

	C	N-C
1. Hardly at all.	7	2
2. To only some extent.	17	2
3. To an average extent.	16	10
4. To a pretty good extent.	33	12
5. To a great extent.	22	19

Chi Square	df	Significance Level
9.40	3	.05

47 - To what extent has ECES made you feel more aware of the possible educational alternatives you have?

	9	10	11	12
1. Hardly at all.	0	4	7	8
2. To only some extent.	7	1	4	3
3. To an average extent.	12	7	15	11
4. To a pretty good extent.	11	15	6	2
5. To a great extent.	10	8	5	4

Comparison	Chi Square	df	Significance Level
9th vs. 12th	7.86	3	.05
10th vs. 11th	9.34	1	.01
10th vs. 12th	12.25	1	.001

51 - To what extent has ECES helped you make better educational decisions?

	9	12	C	N-C
1. Hardly at all.	4	13	27	5
2. To only some extent.	7	4	13	8
3. To an average extent.	9	6	28	10
4. To a pretty good extent.	13	5	19	11
5. To a great extent.	7	0	7	10
- No response	--	--	1	1

Comparison	Chi Square	df	Significance Level
9th vs. 12th	13.49	3	.01
Coll. vs. Non-Coll.	10.04	4	.05

Table V-3 (cont.)

Question

43 - To what extent has ECES helped you understand how your strengths and weaknesses fit in with your educational goals?

	C	N-C
1. Hardly at all.	7	1
2. To only some extent.	15	2
3. To an average extent.	24	12
4. To a pretty good extent.	28	10
5. To a great extent.	21	20

Chi Square	df	Significance Level
10.47	3	.05

42 - To what extent has ECES helped you find definite paths of action in reaching your goals?

	C	N-C
1. Hardly at all.	18	3
2. To only some extent.	26	5
3. To an average extent.	31	10
4. To a pretty good extent.	16	18
5. To a great extent.	4	9

Chi Square	df	Significance Level
22.79	4	.01

54 - To what extent has ECES dealt with problems that are important to you?

	C	N-C
1. Hardly at all.	27	5
2. To only some extent.	23	12
3. To an average extent.	19	12
4. To a pretty good extent.	15	4
5. To a great extent.	9	11
- No response	2	1

Chi Square	df	Significance Level
10.16	4	.05

53 - To what extent has ECEShelped you become a more effective person in general?

	C	N-C	9	12
1. Hardly at all.	34	6	8	16
2. To only some extent.	11	5	7	1
3. To an average extent.	33	15	13	5
4. To a pretty good extent.	14	12	9	3
5. To a great extent.	3	6	3	3
- No response	0	1	--	--

Comparison	Chi Square	df	Significance Level
Coll. vs. Non-Coll.	10.26	3	.05
9th vs. 12th	10.94	3	.05

in understanding their strengths and weaknesses in relation to their occupational goals although the non-college-bound were relatively more positive than the college-bound (Table V-3, Question 44). This finding may reflect group differences in amount of self-awareness and self-evaluation prior to exposure to ECES. Presumably, the college-bound subjects have evaluated themselves in terms of occupations and continuing education in order to have made the decision to attend college or to pursue two years of vocational training. Therefore, the non-college-bound, with more limited educational and occupational goals, would have gained more from examination of their own attributes during their occupational explorations on the system.

When asked to evaluate the impact of the educational information they received from the system, over half of the students thought ECES had been helpful in the area of educational planning (Question 39). Only 27% of the students felt ECES had given them little or no help in becoming aware of the important factors on which to base their educational decisions.

There were differences among the various grade levels in the extent to which the students felt ECES had made them feel more aware of possible educational alternatives (Table V-3, Question 47). The ninth grade students indicated that they had received more help from ECES in this respect than did the twelfth grade students. The tenth grade students, while not differing from the ninth graders, were more favorable in their evaluation of ECES's impact on the expansion of educational alternatives than either the eleventh or twelfth grade students. Interestingly, the ninth grade students did not differ with the eleventh grade students on this question. However, all the subgroup differences make sense in terms of assumed amounts of educational information appropriate for each grade level prior to exposure to ECES.

Similarly, half of the ninth grade students felt that ECES had given them

better than average help in making better educational decisions, compared to only 17% of the twelfth grade students (Table V-3, Question 51). In addition, fewer college-bound students felt that the system had been of considerable help to them in educational decision-making than non-college-bound students (Table V-3, Question 51). The college-bound students were more varied than were the non-college-bound students in their evaluation of the extent to which ECES had helped them understand how their strengths and weaknesses fit in with their educational goals. This difference in the two student subgroups (Table V-3, Question 43), is similar to the difference found in their evaluations of the extent to which the system made them aware of their strengths and weaknesses in regard to their occupational goals. Apparently, the college-bound students have sought and assimilated more occupational and educational information than the non-college-bound, and, therefore, perceive their experiences with ECES as having relatively less impact on them and their decision-making than do the non-college-bound students. It should be noted that, while differences between the subgroups based on future educational plans do occur, the college-bound subjects are not negative toward ECES, but are only less positive than the non-college-bound students.

Included in the section of the questionnaire covering the students' evaluation of the impact of ECES were some questions designed to assess to what extent ECES had helped them find definite paths of action in reaching their goals, had dealt with problems they considered important, and had helped them become generally more effective people. In all three areas, the college-bound felt the system had been of less help to them than did the non-college-bound students (Table V-3, Questions 42, 54, 53). In addition, although 37% of the ninth grade students felt that ECES had only slight impact in making them more effective people, 60% of the twelfth graders felt the system had had little effect on them

in this way. This finding could be interpreted as reflecting differences in developmental stages of self concept between the two grade levels.

Students' evaluations of how best to use ECES revealed similarities and differences of opinion among the subgroups. Most students (Question 2) considered between 45 and 60 minutes to be the right amount of time to use ECES at one sitting (incidentally, this was more time than the students had per session during the field trial). There were no significant differences among the student subgroups in the opinions of how many periods each year would be suitable for students in grades nine through eleven. Most students felt that freshmen, sophomores, and juniors should use the system from 7 to 10 or more times during the school year (Questions 5-7). However, although over half of the students felt that seniors should use the system 10 or more periods during the year, the non-college-bound students were less uniform in this preference than the college-bound, with proportionately more non-college-bound than college-bound students indicating that they thought from 1-3 periods would be appropriate usage of ECES for high school seniors (Table V-4, Question 8). This is a surprising finding considering the fact that college-bound students seemed less enthusiastic about the impact of ECES on their occupational and educational decision-making than the non-college-bound students.

(Insert Table V-4 about here)

When asked in what grade they felt it would be best for a student to begin using ECES, more students chose the ninth grade than any other grade as being the best time to start (Question 10). However, the ninth grade students differed from the twelfth grade students in the relative proportion of ninth graders stating that the eighth grade would be the best time to start using the system (Table V-4, Question 10).

The greatest amount of disagreement among student subgroups occurred on

Table V-4. Differences in Students' Evaluations of How Best To Use ECES

Question

8 - About ho many periods each year do you think would be best for you to use ECES?

12th Grade	C	N-C
1. 0 - periods	0	3
2. 1 - 3 periods	13	13
3. 4 - 6 periods	9	6
4. 7 - 9 periods	14	8
5. 10 or more	57	14
- No response	2	1

Chi Square	df	Significance Level
12.05	3	.01

10 - In what grade do you feel that it would be best for a student to begin sessions with ECES?

Grade	9	12
5	1	0
6	1	0
7	4	1
8	13	5
9	17	12
10	2	6
11	0	3
12	0	0
-	2	0

Chi Square	df	Significance Level
6.14	1	.05

3 - If the system were available all year long, how often would you like to be scheduled to use the system?

	9	12	9	10	10	11	11	12	C	N-C	M	F
1. Several times a week.	28	8	28	9	9	20	20	8	37	28	39	26
2. About once a week.	9	19	9	21	21	14	14	19	50	13	25	38
3. About once a month.	3	0	3	3	3	1	1	0	4	3	4	3
4. Only a few times a year.	0	0	0	2	2	2	2	0	4	0	1	3
- No response	0	1	--	--	--	--	0	1	0	1	1	0

Comparison	Chi Square	df	Significance Level
9th vs. 12th	9.51	1	.01
9th vs. 10th	15.15	1	.01
10th vs. 11th	6.00	1	.05
11th vs. 12th	4.20	1	.05
Coll. vs. Non-Coll.	7.96	1	.01
Male vs. Female	4.84	1	.05

Question 3 (see Table V-4) where they were asked how they would like their sessions with ECES distributed during a one-year period. The ninth grade students and the eleventh grade students were similar in their preferences for a schedule of several times a week as contrasted with the tenth and twelfth grade students, who preferred a schedule of about one session per week, the schedule used during the field trial (Question 3). Proportionately more college-bound students preferred the once-weekly schedule than did the non-college-bound students, most of whom chose the schedule preferred by the ninth and eleventh graders. Females also preferred the once-a-week schedule, while the male students preferred the schedule chosen by the non-college-bound, and the ninth and eleventh grade students.

In addition to the questions about how best to schedule use of ECES, the experimental subjects were asked to state their opinions as to which standard counseling functions could be handled best by ECES alone, by the counselor alone, by both the counselor and ECES, by either the counselor or ECES, or by some other source. These questions served the dual purpose of indirectly assessing the students' satisfaction with their experiences on the system and also of determining their attitudes toward how their particular counseling needs can best be satisfied. While students' attitudes should not be the sole basis for evaluating how ECES can best be integrated into high school counseling programs, certainly the opinions of the main consumers of such services should be given appropriate consideration.

Examination of the students' responses to the 16 questions relating to this area of counseling functions revealed only one significant difference in responses of the subgroupings of grade level, ethnic background, sex, and future educational plans. Interestingly, females differed significantly from males in their opinions as to how the counseling function of helping them make decisions about what to do

after high school could best be handled (Table V-5, Question 72). Male students preferred, in order, the choices of the counselor, the counselor and ECES, and ECES alone. On the other hand, the females chose the counselor and ECES, the counselor alone, and then some other source. Very few females chose ECES alone. Only five male students chose the option of "some other source". This sex difference can be explained in terms of the likelihood that more females than males would depend on such outside influences as parents, peers, and fiancés for the decisions about what to do after high school. One would also expect the females to be more subjectively oriented to this decision-making process and less likely, therefore, to depend as heavily as males on the relatively impersonal influence of a computer.

Table V-5. Sex Difference in Students' Evaluation of Appropriate Role of ECES in Relation to Counselor

Question

72 - Helping you make decisions about what to do after high school is one of the things that are generally thought to be necessary in a guidance program. Please decide whether this could be best handled by a counselor, ECES, or a combination of the two.

	M	F
1. The counselor.	22	14
2. ECES.	14	5
3. The counselor and ECES.	21	33
4. Either the counselor or ECES could do it.	4	6
5. Some other source.	5	11
- No response	4	1

Chi Square	df	Significance Level
9.48	3	.05

Responses to the other 15 questions contained in this section of the questionnaire were statistically uniform and will, therefore, be reported in terms of percent of agreement within the total experimental group. There were four distinct trends evident in the pattern of responses to these questions: preference

for the counselor alone; preference for ECES alone; preference for ECES and ECES with the counselor; and preference for the counselor and ECES with the counselor.

On only one question did the students as a whole clearly choose the counselor alone as the best way to handle the counseling function considered (Question 60). Forty-eight percent of the students felt that the counselor could best deal with their individual situation and needs better. Only 14% of the students chose ECES alone as being best suited for dealing with this matter, and 20% chose a combination of ECES and the counselor. Here is evident the students' judgment of the limitation of the computer's ability to deal with all the personal variables involved in counseling an individual.

On only two questions were there definite preferences for ECES alone in dealing with the students' counseling needs (Questions 64 and 70). Sixty percent of the students thought that ECES could give them the most help in getting useful facts about occupations, and 55% shared their opinion in regard to discovering new occupational possibilities they might consider. This preference coincides with the students' consistent satisfaction with the system's occupational information content.

Students chose a combination of ECES alone and the counselor and ECES on seven of the counseling functions mentioned. Sixty percent of the students felt that the above combination could best handle helping them understand their interests better (Question 59), 65% chose the same combination for helping them understand their abilities better (Question 62). A combination of ECES alone or ECES and the counselor was chosen by 68% of the students for dealing with seeing the connection between their own high school experiences and their future plans (Question 63). Seventy-eight percent of the students felt that helping them see the connection between interests and possible occupations could best be handled by ECES or ECES and the counselor (Question 65). This evaluation was shared by 76%

of the students in regard to seeing the connection between their abilities and possible occupations (Question 66). Three-fourths of the students preferred using ECES or ECES and the counselor for discovering new educational possibilities they might consider (Question 69), and 69% chose that combination for finding information on colleges or training schools (Question 71). All these choices appear to reflect the nature of, and satisfaction gained from, the students' use of the specific information contained in ECES.

The students' preference for working with the counselor alone and with ECES and the counselor appeared on those questions dealing with less specific kinds of information gathering and less specific kinds of feedback than they received from ECES concerning their interests and abilities in relation to their occupational and educational explorations. There were four such areas in which the counselor was preferred more than was implied by the choice of ECES alone or ECES and the counselor. The first was in the area of obtaining information about high school courses, in which 62% of the students preferred either the counselor alone, or the counselor and ECES (Question 58). This preference was shared by 59% of the students when considering summer experience in occupations they were considering (Question 61). When thinking about goals, plans, and decisions, 55% of the students preferred working with the counselor, or with the counselor and ECES (Question 67). Sixty-seven percent of the students chose the counselor, or the counselor and ECES, for obtaining useful advice about what they should do (Question 68). The students seem to attribute the counselor with an integrative and personalized role, while they see the system as providing the kinds of data with which they and the counselor may work. In fact, 70% of the students felt that they would profit more from talks with their counselors because of using ECES (Question 36).

Based on students' attitudes concerning how ECES could be used to benefit

them in their counseling experiences, the system appears to be best suited for providing students with specific kinds of occupational and educational information, and with an understanding of their interests and abilities in relation to specific occupations and educational programs. Counselors, with use of ECES in an appropriate data-providing capacity, are considered best able to deal with information about specific high school courses, with the individual's personal needs and situation, and with plans and decision-making for the future.

Summarizing student attitudes toward ECES, as assessed by the special questionnaire filled out by the members of the experimental group, most students enjoyed using the system and felt that it had lived up to their expectations to a pretty good extent. Furthermore, they felt that ECES could benefit all types of students. They felt that ECES had been helpful in the areas of occupational and educational planning, in making them aware of possible occupational alternatives, and in helping them become aware of the important factors involved in making occupational decisions. They were less enthusiastic as a group concerning the amount of help they felt they received from the system in regard to understanding the important factors involved in making educational decisions. The students were practically unanimous in their evaluations of how best to coordinate use of ECES with the work of their counselors in meeting students' counseling needs. ECES was assigned the role of providing important data on occupations, educational possibilities, and on how their abilities and interests relate to their occupational and educational preferences. The counselor was seen as integrating this information with their knowledge of the more individualized and personal aspects of the students' situations and career decisions.

The college-bound and the non-college-bound subgroupings of students revealed more discrepancy in responses than all the other subgroups. Consistently, the non-college-bound students were relatively more favorable in their reactions

toward the system, and indicated a greater degree of impact on their educational decision-making. They also felt that the system had helped them to a greater extent than did the college-bound in understanding how their strengths and weaknesses fit in with their occupational goals. Furthermore, this difference in evaluation of effect extends to more global aspects such as making them more effective people, finding definite paths of action in reaching their goals, and in dealing with problems they perceive as being important to them. More non-college-bound than college-bound students also felt that ECES had tried to choose a major for them. All these differences suggest discrepant levels of the kinds of information gathering and critical evaluations associated with having made or not made educational plans that extend beyond the high school years. It may be that ECES has relatively more to offer the non-college-bound student than the college-bound student who has already explored occupational and educational factors in making his decision to continue schooling beyond the high school level.

The only difference in response in terms of students' ethnic background was in the degree to which the students felt that ECES had tried to choose an occupation for them. More blacks than whites felt that the system had been directive in this way. This difference may be similar to the one found between the college-bound and the non-college-bound students in regard to the amount of educational information at their disposal before their exposure to ECES. When students who were unaccustomed to critically evaluating information, whether educational or occupational, were expected to do so during their use of ECES, the result may have been feelings of having been directed toward specific choices.

Differences of response between the four grade levels were found on questions pertaining to the degree of expansion of educational alternatives, and to making better occupational and educational decisions. These differences were between ninth and/or tenth grade students and eleventh or twelfth grade students, with the

underclassmen indicating that they received more help from ECES in these areas than did the upperclassmen. These differences in perceived impact can be accounted for by the effect of differing amounts of occupational and educational information likely to be known by students at the four grade levels before their exposure to ECES.

Trend in Students' Attitudes toward ECES

One of the questions to be explored during the Montclair field trial was whether or not an observable trend in student users' attitudes toward ECES could be found. The researchers attempted to measure changes in the experimental subjects' attitudes by analyzing the patterns of responses to the Student Reaction Form (SRF), which was filled out by every student at the end of each of his sessions on the system. The SRF contained questions about the helpfulness and understandability of the instructions and information the students saw on the film images projector, on the typewriter, and in the Reference Manual, about how much they enjoyed using the system during the session in question, and whether or not they felt they had made any progress in thinking about their futures. The students also were asked how helpful the system had been in terms of better understanding their interests and abilities, getting useful information about occupations, courses of study, both in high school and in college or vocational schools, and seeing connections between their interests and abilities and possible occupations.

In order to survey the students' attitudes over a number of sessions, their responses to the SRF for the first, third, fifth, and seventh sessions were analyzed. Although there were 11 weekly sessions during the field trial, the analysis included no sessions beyond the seventh due to the fact that seven sessions was the average number of sessions the system was used by the students as a whole. Beyond the seventh session, the number of students using the system

decreased to such an extent that statistical comparisons of student subgroups could not be reasonably performed. Frequency distributions of students' responses to the Student Reaction Form for the first, third, fifth, and seventh sessions are included in Appendix C. Questions on which student subgroup differences emerged are presented in Tables V-6 to V-11 and discussed below.

Examination of the students' responses to the SRF revealed clear trends of student agreement on eight of the eighteen questions on the Form. From the first session to the seventh, all students agreed that the instructions and information they saw on the screen were both helpful and easy to understand (Questions 1 and 4). They also considered the information and instructions they saw on the typewriter to have been easy to understand (Question 5).

The students also were positive in their appraisal of how helpful they thought the instructions and information were in the Reference Manual. After the first session, during which use of the Manual was not specifically required, the majority of the students consistently stated that they considered the Reference Manual to be either "very helpful" or "fairly helpful" (Question 3).

When responding to the question about how much <u>progress</u> they felt they had made in thinking about their futures during the first, third, fifth, and seventh sessions, the students' attitudes varied across sessions (Question 7). During the first session, in which all students were familiarized with the equipment and routines of the project and went through the introductory phase of the system, they stated that they had made "some progress, but not a lot", or were "about where I was when I started today". At the end of the third session, by which time they would have been pursuing educational or occupational explorations on the system, their responses changed, in order of frequency, to "I've really learned a lot today", "Today I've made some progress, but not a lot", and "I'm about where I was when I started today". For both the fifth and seventh sessions, the order

of response became "I've made some progress, but not a lot", "I've really learned a lot...", and "I'm about where I was when I started today". While their initial enthusiasm for their occupational and educational explorations does taper off a little, most students indicate that every use of ECES does help them in thinking about their futures. Furthermore, the majority of students consistently stated that they enjoyed working with the system (Question 8).

When asked how much help they thought they got in understanding their interests better (Question 9), more than half of the students indicated that they had received "some help, but not a lot", or "a lot of help" on the first and seventh sessions. At the third and fifth sessions, more students indicated that they had gotten "a lot of help" rather than "some help, but not a lot". However, at the end of the fifth session, 12% of the students indicated that they did not feel that better understanding their interests applied to what they had done on the system that day, and 16% gave the same indication at the end of the seventh session. By the time the students had reached their fifth or seventh session, they would be well aware of their tested and self-estimated interests. They probably would have received several different summary charts of their occupational and educational explorations which would contain this information.

After the first session, in which most students indicated that either they had received no help in getting useful facts about occupations during that session, or what they had done did not apply to this area, the majority of student consistently stated that they had received "a lot" or "some" help in getting occupational information (Question 14). Not only does this trend point out the satisfaction the students were experiencing in regard to the occupational information they received, but it also may be interpreted as indicating that students spent a great deal of their time exploring occupations. In addition, this particular question was one of two out of ten such questions referring to the specific nature

of their use of the system on which there was no difference between subgroups for any of the sessions. The other question was the one referring to better understanding their interests, on which a clear trend of student agreement across sessions was shown. In these two areas, while the trends of attitudes may not be the same, the trends are supported by the experimental subjects as a whole. Therefore, both in regard to getting useful information about occupations and in better understanding their interests, ECES elicits similar attitudes from all students.

(Insert Table V-6 about here)

Table V-6 presents the three questions on which there were subgroup differences at all four sessions surveyed. More differences in response patterns were found between the college-bound and the non-college-bound students than between any other subgroups. At the end of the first session, in response to Question 15, which deals with finding out about courses the students would need for post-high school education and training, over half of the non-college-bound students indicated that they had received help from ECES, as compared with only 17% of the college-bound students. At the end of the third session, this difference appeared again, with 74% of the non-college-bound indicating help, as compared with less than half of the college-bound. Although the percentage of college-bound students stating they had received help increased after the first session, the non-college-bound group remained somewhat more favorable in their assessments. By the end of the fifth session, the gap narrowed further, with the number of the non-college-bound reporting help accounting for three-fourths of the group, while the college-bound students reporting help had increased to 59% of that group. However, at the end of the seventh session, the discrepancy increased. Eighty-four percent of the non-college-bound group felt they had received help in finding out about post-high school courses as compared with 55% of the college-bound group. The trend in student opinion about the amount of help they received in this area is,

then, a function of whether or not they intend to continue their education beyond high school. The responses of non-college-bound students indicate that they feel they had gained more help in receiving educational information relating to post-high school courses than do the responses of the college-bound students.

In addition to the difference found between subgroups based on future educational plans, other subgroup differences emerged from responses to Question 15 at the end of the third session. Thirty-eight percent of the black students said that they had received "just a little help" or "no help at all", as compared with 15% of the white students. Sixty-four percent of the male students said they had received help in finding out about courses, while only 49% of the females shared their opinion. The tenth grade students felt they had been helped to a greater extent than did the twelfth grade students, with 63% of the sophomores agreeing that they had been helped, as contrasted with only 38% of the seniors.

There were college-bound, versus non-college-bound, group differences on Question 16 at the first, third, and fifth sessions. Question 16 deals with how much help the students felt they got from the system in finding out about high school majors they should consider. The college-bound students consistently indicated that they received considerably less help in this area than did the non-college-bound students. The college-bound group would have decided on college preparatory courses when making the decision to continue schooling beyond high school. Interestingly, there was no difference between these two subgroups on the seventh session.

A sex difference appeared in the responses to Question 16 during the third, fifth, and seventh sessions. The males consistently stated with more frequency than the females that, in finding out about high school majors, they either received "no help at all" or that what they had done on the system during those sessions did not apply to finding out about that particular kind of educational information.

Table V-6. Differences in Students' Responses to Questions on the Student Reaction Form which Appear at Sessions 1, 3, 5, and 7

Session 1

15 - How much help do you think you got today in finding out about courses you would need for further education and training?

	C	N-C
1. A lot of help.	2	3
2. Some help, but not a lot.	11	16
3. Just a little help.	7	13
4. No help at all.	44	14
5. Does not apply today.	41	9
- No response	3	0

Chi Square	df	Significance Level
23.29	3	.001

16 - How much help do you think you got today in finding out about high school majors you should consider?

	C	N-C
1. A lot of help.	0	5
2. Some help, but not a lot.	7	9
3. Just a little help.	5	12
4. No help at all.	51	20
5. Does not apply today.	41	9
- No response	4	0

Chi Square	df	Significance Level
21.41	2	.001

18 - How much help do you think you got today in finding out about colleges or vocational schools you might want to consider?

	C	N-C
1. A lot of help.	1	3
2. Some help, but not a lot.	3	10
3. Just a little help.	2	7
4. No help at all.	57	25
5. Does not apply today.	41	10
- No response	4	0

Chi Square	df	Significance Level
19.46	2	.001

Session 3

15 - How much help do you think you got today in finding out about courses you would need for further education and training?

	W	B	C	N-C	M	F	10	12
1. A lot of help.	35	20	28	27	31	24	15	7
2. Some help, but not a lot.	17	4	13	8	13	8	5	2
3. Just a little help.	4	5	8	1	6	3	4	3
4. No help at all.	11	14	22	3	17	8	3	6
5. Does not apply today.	23	6	23	6	7	22	6	11
- No response	8	1	7	2	3	6	5	2

Table V-6 (cont.)

Session	Question
3	15 - (cont.)

Comparison	Chi Square	df	Significance Level
White vs. Black	11.67	3	.01
Coll. vs. Non-Coll.	13.69	3	.01
Male vs. Female	13.17	3	.01
10th vs. 12th	7.09	2	.05

16 - How much help do you think you got today in finding out about high school majors you should consider?

	W	B	C	N-C	M	F	9	12	10	12	11	12
1. A lot of help.	24	14	21	17	19	19	14	2	9	2	13	2
2. Some help, but not a lot.	13	3	7	9	10	6	4	3	4	3	5	3
3. Just a little help.	7	8	10	5	10	5	5	0	7	0	3	0
4. No help at all.	17	15	24	8	24	8	7	12	3	12	10	12
5. Does not apply today.	31	8	32	7	11	28	10	12	10	12	7	12
- No response	6	2	7	1	3	5	1	2	5	2	0	2

Comparison	Chi Square	df	Significance Level
White vs. Black	9.66	4	.05
Coll. vs. Non-Coll.	9.66	4	.05
Male vs. Female	17.92	4	.01
9th vs. 12th	9.62	3	.05
10th vs. 12th	15.11	3	.01
11th vs. 12th	7.87	3	.05

18 - How much help do you think you got today in finding out about colleges or vocational schools you might want to consider?

	C	N-C
1. A lot of help.	4	12
2. Some help, but not a lot.	3	11
3. Just a little help.	6	2
4. No help at all.	35	10
5. Does not apply today.	42	11
- No response	11	1

Chi Square	df	Significance Level
12.88	3	.01

5	15 - How much help do you think you got today in finding out about courses you would need for further education and training?

	C	N-C
1. A lot of help.	27	14
2. Some help, but not a lot.	13	13
3. Just a little help.	8	0
4. No help at all.	10	4
5. Does not apply today.	21	4
- No response	2	1

Chi Square	df	Significance Level
8.87	2	.05

Table V-6 (cont.)

Session 5

16 - How much help do you think you got today in finding out about high school majors you should consider?

	9	11	W	B	M	F	C	N-C
1. A lot of help.	12	3	18	5	13	10	11	12
2. Some help, but not a lot.	6	4	12	5	12	5	8	9
3. Just a little help.	3	1	3	2	3	2	2	3
4. No help at all.	6	10	14	15	21	8	23	6
5. Does not apply today.	8	14	29	10	11	28	35	4
- No response	1	0	3	1	1	3	2	2

Comparison	Chi Square	df	Significance Level
9th vs. 11th	8.93	1	.01
White vs. Black	6.49	2	.05
Male vs. Female	15.98	3	.01
Coll. vs. Non-Coll.	19.71	2	.001

18 - How much help do you think you got today in finding out about colleges or vocational schools you might want to consider?

	C	N-C	M	F
1. A lot of help.	4	9	10	3
2. Some help, but not a lot.	1	6	4	3
3. Just a little help.	2	4	3	3
4. No help at all.	29	6	26	9
5. Does not apply today.	42	8	17	33
- No response	3	3	1	5

Comparison	Chi Square	df	Significance Level
Coll. vs. Non-Coll.	30.53	3	.001
Male vs. Female	13.74	3	.01

7

15 - How much help do you think you got today in finding out about courses you would need for further education and training?

	C	N-C
1. A lot of help.	15	15
2. Some help, but not a lot.	11	6
3. Just a little help.	8	1
4. No help at all.	11	1
5. Does not apply today.	14	1
- No response	2	2

Chi Square	df	Significance Level
14.78	2	.001

16 - How much help do you think you got today in finding out about high school majors you should consider?

	M	F
1. A lot of help.	8	9
2. Some help, but not a lot.	8	7
3. Just a little help.	4	2
4. No help at all.	16	4
5. Does not apply today.	8	17
- No response	2	2

Chi Square	df	Significance Level
10.66	3	.05

Table V-6 (cont.)

Session	Question

7 — 18 - How much help do you think you got today in finding out about colleges or vocational schools you might consider?

	C	N-C	M	F
1. A lot of help.	2	6	4	4
2. Some help, but not a lot.	5	5	7	3
3. Just a little help.	4	3	5	2
4. No help at all.	22	3	17	8
5. Does not apply today.	24	6	11	19
- No response	4	3	2	5

Comparison	Chi Square	df	Significance Level
Coll. vs. Non-Coll.	14.10	3	.01
Male vs. Female	8.59	3	.05

A difference in responses of students from different ethnic backgrounds was also revealed on Question 16 during sessions three and five. Black students consistently reported that they received less help than did the white students in finding out about high school majors.

Not surprisingly, the twelfth grade students differed from all the students at the other grade levels in their opinions of how much help they had received from the system during their third session in finding out about high school majors. Only 16% of the seniors said they had received help, as contrasted with 56% of the freshmen, 48% of the sophomores, and 51% of the juniors. A difference between ninth and eleventh grade students also appeared during the seventh session, with 58% of the freshmen indicating they had been helped and with only 25% of the juniors concurring.

The difference in trend of student attitude which depends on the nature of the students' future educational plans is also evident from examination of responses to Question 18 of the Student Reaction Form. Across all four sessions surveyed, the college-bound students indicated that they had received less help than did the non-college-bound in finding out about colleges or vocational schools they might want to consider. This difference, presumably, reflects the differences between the groups in kinds and amount of such information already at their command at the time of their first exposure to ECES.

A sex difference also appeared in response to Question 18 during the fifth and seventh sessions. As in response to Question 16, the males indicated they had received less help than did the females in finding out about colleges and vocational schools. Both these sex differences could be a result of the males spending less time in the educational information sections of ECES than did the females, and therefore, getting less specific information about educational institutions and high school majors.

(Insert Table V-7 about here)

Table V-7. Differences in Students' Responses to Questions on the Student Reaction Form which Appear Only at Sessions 1, 5, and 7

Session 1

12 - How much help do you think you got today in seeing connections between your abilities and possible occupations?

	C	N-C
1. A lot of help.	25	20
2. Some help, but not a lot.	30	23
3. Just a little help.	14	5
4. No help at all.	13	3
5. Does not apply today.	22	4
- No response	4	0

Chi Square	df	Significance Level
8.67	2	.05

17 - How much help do you think you got today in finding out about courses you might take in college or vocational school?

	C	N-C
1. A lot of help.	0	6
2. Some help, but not a lot.	5	8
3. Just a little help.	8	8
4. No help at all.	51	23
5. Does not apply today.	40	10
- No response	4	0

Chi Square	df	Significance Level
13.40	2	.01

Session 5

12 - How much help do you think you got today in seeing connections between your abilities and possible occupations?

	C	N-C
1. A lot of help.	25	18
2. Some help, but not a lot.	17	13
3. Just a little help.	10	0
4. No help at all.	9	3
5. Does not apply today.	18	1
- No response	2	1

Chi Square	df	Significance Level
3.93	1	.05

17 - How much help do you think you got today in finding out about courses you might take in college or vocational school?

	C	N-C	M	F
1. A lot of help.	26	9	15	20
2. Some help, but not a lot.	8	10	10	8
3. Just a little help.	4	3	6	1
4. No help at all.	15	5	15	5
5. Does not apply today.	24	8	14	18
- No response	4	1	1	4

Table V-7 (cont.)

Session	Question
5	17 - (cont.)

Comparison	Chi Square	df	Significance Level
Coll. vs. Non-Coll.	6.72	2	.05
Male vs. Female	8.86	3	.05

7 — 12 - How much help do you think you got today in seeing connections between your abilities and possible occupations?

	10	12
1. A lot of help.	4	7
2. Some help, but not a lot.	3	3
3. Just a little help.	3	1
4. No help at all.	5	0
5. Does not apply today.	6	1

Chi Square	df	Significance Level
7.62	1	.01

17 - How much help do you think you got today in finding out about courses you might take in college or vocational school?

	C	N-C
1. A lot of help.	14	14
2. Some help, but not a lot.	7	3
3. Just a little help.	3	2
4. No help at all.	15	1
5. Does not apply today.	20	3
- No response	2	3

Chi Square	df	Significance Level
14.62	2	.001

Table V-7 includes the two questions on which subgroup differences appeared only on the first, fifth, and seventh sessions. Question 12 asked the students to indicate how much help they think they received at the end of each session in seeing connections between their abilities and possible occupations. College-bound students differed in their responses from the non-college-bound students on sessions one and three. They stated that they had received less help in evaluating their abilities in relation to possible occupations than did the non-college-bound group. However, the twelfth grade students stated that they had received more help at the seventh session than did the tenth grade students. It should be kept in mind that the twelfth grade students used the system less than any other grade level, and that those seniors using ECES as many as seven times are apt to be those who are more than moderately enthusiastic about the system and may not be representative of the total twelfth grade group.

The other question on which subgroup differences emerged at the first, fifth, and seventh sessions was Question 17, which asked the students how much help they had received in finding out about courses they might take in college or vocational school. Again, there were differences between the college-bound and the non-college-bound groups. The non-college-bound students indicated they had received more college and vocational school course information than did the college-bound students. In addition, males indicated they had received less help than did the females during the fifth session. This difference is similar to the one observed on the educational information questions mentioned above.

Taken as a group, the majority of the students found the instructions and information on the typewriter helpful across all sessions surveyed (Question 12). However, student opinion was varied on Question 17 after the first session, during which 76% of the students stated that they either received no help at all in finding out about college or vocational school courses or that what they did

during their first session did not apply to the question. At the end of the third, fifth, and seventh sessions, student opinion was pretty evenly divided between "help" and "no help" or "does not apply", with the more positive responses tending to be slightly more prevalent during the fifth and seventh sessions (Question 17).

Table V-8. Differences in Students' Responses to a Question on the Student Reaction Form which Appear Only at Sessions 1, 3, and 5

Session 1 — Question 6 - How easy was it to understand the instructions and information you saw today in the BOOKLET?

	9	10	M	F
1. Very easy.	16	12	29	27
2. Fairly easy.	8	18	32	19
3. Fairly difficult.	3	1	4	0
4. Very difficult.	0	0	0	0
5. I did not use it today.	18	7	17	29
- No response	0	2	3	1

Comparison	Chi Square	df	Significance Level
9th vs. 10th	6.81	2	.05
Male vs. Female	7.02	2	.05

Session 3 — Question 6 - How easy was it to understand the instructions and information you saw today in the BOOKLET?

	W	B
1. Very easy.	63	21
2. Fairly easy.	19	11
3. Fairly difficult.	1	6
4. Very difficult.	0	0
5. I did not use it today.	11	8
- No response	4	4

Chi Square	df	Significance Level
6.55	2	.05

Session 5 — Question 6 - How easy was it to understand the instructions and information you saw today in the BOOKLET?

	M	F
1. Very easy.	36	45
2. Fairly easy.	12	5
3. Fairly difficult.	1	1
4. Very difficult.	2	0
5. I did not use it today.	7	3
- No response	3	2

Chi Square	df	Significance Level
5.97	1	.05

Table V-8 presents the question on which subgroup differences were found only during sessions one, three, and five. Question 6 deals with the students' evaluations of how easy to understand they found the instructions and information in the Reference Manual. A sex difference appeared at the first and fifth sessions. At the end of the first session, 58% of the females indicated that they had found the information easy to understand as compared with 71% of the male students. By the time of their fifth session with ECES, the females surpassed the males in number of students considering the instructions and information in the Manual to be very easy to understand. Eighty percent of the females found them very easy to understand as compared with 59% of the males.

There was also a difference in response between the ethnic groupings at the end of the third session. Forty-two percent of the black students found the Manual very easy to understand as compared with 64% of the white students.

In addition, at the end of the first session, 53% of the ninth grade students indicated they had found the Manual easy to understand as compared with three-fourths of the tenth grade group.

Other than the subgroup differences reported above, the majority of the students as a whole found the information and instructions in the Manual easy to understand for all four sessions (Question 6). It should be kept in mind that all the subgroup differences reported in Table V-8 occur only at the .05 level of significance. If a more rigorous significance level had been chosen, these differences would not have been statistically significant.

Table V-9 presents the question on which subgroup differences appeared only at the fifth and seventh sessions. Question 10 asks how much help the students felt they received in better understanding their abilities. College-bound students felt they had received less help than did the non-college-bound students in understanding their abilities at the end of their fifth session on the system.

At the end of the seventh session, 91% of the twelfth grade students felt they had had help in better understanding their abilities as compared with 47% of the tenth grade students, and 60% of the eleventh grade students. These differences may represent actual help in this area, or confirmation of the upperclassmen's own knowledge of their own abilities. The difference, especially between the eleventh and twelfth grade students, may be attributable to the probability that those twelfth grade students using ECES more than the group's average of 5.7 times may not be representative of the twelfth grade sample.

On Question 10, the majority of the students felt they had had help in better understanding their abilities. This agreement held for all four sessions surveyed.

Table V-9. Differences in Students' Responses to a Question on the Student Reaction Form which Appear Only at Sessions 5 and 7

Session 5 — Question 10 - How much help do you think you got today in understanding your abilities better?

	C	N-C
1. A lot of help.	25	10
2. Some help, but not a lot.	14	17
3. Just a little help.	10	2
4. No help at all.	11	3
5. Does not apply today.	20	2
- No response	1	2

Chi Square	df	Significance Level
14.32	2	.001

Session 7 — Question 10 - How much help do you think you got today in understanding your abilities better?

	10	12	11	12
1. A lot of help.	2	7	4	7
2. Some help, but not a lot.	4	4	7	4
3. Just a little help.	4	1	3	1
4. No help at all.	5	0	2	0
5. Does not apply today.	6	0	5	0
- No response	-	-	2	0

Comparison	Chi Square	df	Significance Level
10th vs. 12th	12.14	1	.001
11th vs. 12th	4.50	1	.05

Table V-10 presents the two questions on which subgroup differences appeared only on the first and fifth sessions. Question 2 refers to the instructions and information the students saw on the typewriter. At the end of their first session, 75% of the tenth grade students indicated that they thought the typewritten information was "very helpful", as compared to 52% of the twelfth grade students. At the end of their fifth session, 63% of the white students, compared to 44% of the black students, found the material presented on the typewriter to be "very helpful". For all sessions surveyed, the vast majority of the students as a whole found this information helpful.

Subgroup differences at sessions one and five were also found on Question 11, which asks the students to evaluate how much help they felt they received in seeing connections between their interests and possible occupations. At the end of the first session, 16% of the white students, compared to only 5% of the black students indicated that what they had done on the system that day did not apply to better understanding their abilities in relation to possible occupations. By the end of the fifth session, 83% of the non-college-bound students said they had received help in this area, as compared with 66% of the college-bound group. These differences in student attitude may reflect differing levels of self-knowledge between the white and black, and between the college-bound and the non-college-bound, students. Considering the levels of significance met by the two subgroup comparisons, the difference in student attitude found between the two groups based on future educational plans is more important than that found between the two ethnic groups.

On the whole, and across all four sessions, the majority of students felt that they had received help in seeing the relationship between their own abilities and the occupations they were considering (Question 11).

(Insert Table V-10 about here)

Table V-10. Differences in Students' Responses to Questions on the Student Reaction Form which Appear Only at Sessions 1 and 5

Session 1

2 - How helpful to you were the instructions and information you saw today on the TYPEWRITER?

	10	12
1. Very helpful.	30	19
2. Fairly helpful.	7	11
3. A little helpful.	1	3
4. Not helpful at all.	1	0
5. I did not use it today.	0	2
- No response	1	1

Chi Square	df	Significance Level
4.11	1	.05

11 - How much help do you think you got <u>today</u> in seeing connections between your <u>interests</u> and possible occupations?

	W	B
1. A lot of help.	24	23
2. Some help, but not a lot.	40	14
3. Just a little help.	14	8
4. No help at all.	9	6
5. Does not apply today.	18	3
- No response	2	2

Chi Square	df	Significance Level
7.96	3	.05

Session 5

2 - How helpful to you were the instructions and information you saw today on the TYPEWRITER?

	W	B
1. Very helpful.	35	24
2. Fairly helpful.	22	7
3. A little helpful.	15	1
4. Not helpful at all.	4	4
5. I did not use it today.	3	1
- No response	0	1

Chi Square	df	Significance Level
4.73	1	.05

11 - How much help do you think you got <u>today</u> in seeing connections between your <u>interests</u> and possible occupations?

	C	N-C
1. A lot of help.	23	14
2. Some help, but not a lot.	17	16
3. Just a little help.	14	0
4. No help at all.	9	3
5. Does not apply today.	5	2
- No response	3	1

Chi Square	df	Significance Level
12.89	2	.01

Table V-11 contains the one question on which subgroup differences emerged only at the seventh session. Question 13 deals with how much help the students felt they had received from the system in discovering new occupational possibilities they might consider. Although more than half of the students as a whole agreed that they had had help in this area at the first, third, fifth, and seventh sessions (Question 13), 91% of the twelfth grade students felt that they had been helped in this area, as compared with a little more than half of the eleventh graders. Again, this difference may be a result of the unique nature of the twelfth graders using the system at least seven times.

Once again, the non-college-bound group indicated that they had been helped to a greater extent than did the college-bound group. Seventy-six percent of the non-college-bound group said they had received help in discovering new occupational possibilities, compared to 55% of the college-bound group. This difference appeared only at the seventh session. There was no such difference in either the first, third, or fifth of the students' sessions on ECES. It may be that the college-bound students had received all the help they felt they needed by the time of the seventh session.

Table V-11. Differences in Students' Responses to a Question on the Student Reaction Form which Appear Only at Session 7

Session	Question	11	12	C	N-C
7	13 - How much help do you think you got today in discovering new occupational possibilities you might look into?				
	1. A lot of help.	5	10	18	14
	2. Some help, but not a lot.	6	1	12	4
	3. Just a little help.	1	0	4	2
	4. No help at all.	6	1	17	2
	5. Does not apply today.	4	0	9	2
	- No response	1	0	1	2

Comparisons	Chi Square	df	Significance Level
11th vs. 12th	10.41	1	.01
Coll. vs. Non-Coll.	7.36	2	.05

Summarizing the trends in students' attitudes toward their use of ECES, the majority of students enjoyed working with the system, found the material easy to read and to understand, and felt that they had made progress in thinking about their futures as a result of each session with ECES. They thought they got help in better understanding their interests, and in getting useful facts about occupations.

The non-college-bound students received more help than the college-bound students in finding out about courses they might take in future education or training, about high school majors they should consider, and about information about colleges and vocational schools they might like to consider. At the end of their fifth session with ECES, the non-college-bound also indicated that they felt they had received help more than did the college-bound in seeing the relationship between their interests and abilities and possible occupations. They also felt that they were better able to understand their abilities as a result of using the system than did the college-bound group.

Ethnic differences in students' responses emerged on the first, third, and fifth sessions in regard to course information, high school majors to consider, and the extent to which the students found the instructions and information on the typewriter and in the Reference Manual either easy to understand or helpful to them. The black students report more help in obtaining educational information than do the white students, and found the typewritten instructions and information more helpful at the end of the fifth session, but the Reference Manual less easy to understand at the end of the third session. This difficulty may reflect initial confusion in working with the material on the part of the black student which dissipated as they became more accustomed to the procedure used with the system. Black students also reported greater initial impact on seeing the relationship between their interests and possible occupations than did the white students.

There were sex differences in response to items concerning course information, high school majors, college and vocational school information, and how easily the students understood the instructions and information they found in the Reference Manual. In general, the males felt they had received more educational information than did the females and had more difficulty than the females in understanding the Manual. Female students would be expected to have less difficulty in understanding printed material and to have already been more aware of educational information than the male students.

Differences in student attitudes toward the system were found between grade levels on questions pertaining to educational information, better understanding their abilities, seeing the connections between their abilities and possible occupations, and discovering new occupational possibilities. At the end of their first, third, and fifth sessions, underclassmen, with one exception, indicated they had received more help than twelfth graders in finding out about high school majors, and courses they might consider in relation to further education and training. In addition, tenth graders had less trouble than ninth graders in understanding the information and instructions they saw in the Reference Manual during their first session on the system. Sophomores found the material presented by the typewriter at the first session to be more helpful than did the seniors.

However, beginning with a grade level difference in response at the end of the fifth session, and continuing through four differences found in the responses of the seventh session, the twelfth grade students exhibited a rather unpredictable trend of attitude toward ECES. Contrary to the trend of seeing less utility in the educational information presented by ECES they began to be more positive than students at other grade levels in relation to better understanding their abilities, seeing connections between their abilities and possible occupations,

and in discovering new occupational possibilities. This somewhat puzzling trend was explained by the assumption that those twelfth grade students using the system seven times do not represent the twelfth grade as a group due to the fact that seniors' average use of ECES was about six sessions. The relatively few twelfth graders using the system beyond that point are likely to be more enthusiastic about the possibility of learning more from ECES than the seniors who, presumably, already knew considerable amounts of educational and occupational information when first exposed to the system and, therefore, terminated their contact with ECES after the first four or five sessions.

Parent Attitudes

In response to indications of interest from parents concerning their sons' and daughters' use of ECES, an Open House for Parents was organized by School and Project personnel during the ninth week of the field trial. Invitations to the Open House were sent to the parents of all experimental subjects and approximately 20% of these parents attended. The presentation involved an introductory film, a demonstration of the system by the Director of Guidance, and the opportunity for the parents to sit at the terminals and try out the system themselves. The Open House lasted for two hours and ended after a thoughtful discussion with the parents concerning their childrens' use of the system as well as the value of such a system for all high school students.

Although the parents who attended the Open House cannot be considered to be a representative sample of parents of system users, their reactions to ECES were consistently favorable, especially while they were actually using the system. Several parents reported that their sons or daughters had increased their interest in further education and in occupations they had explored in the system. One father was especially appreciative of the interest his son had developed in thinking about the relevance of his own high school performance in regard to

future education and employment. Other parents expressed the wish that they had had the opportunity to use ECES during their own high school careers. Many of the parents stated that, having seem the system, they better understood the printouts their children had brought home and planned to review them with their children.

In order to survey more accurately the attitudes of the parents of the students using ECES, a comprehensive questionnaire was sent to all the parents of the experimental group after the Open House was held. The Parent Questionnaire (see Appendix D) was designed to assess the extent to which the parents of the experimental group had discussed their sons' and daughters' use of ECES, how much help the system gave their child in terms of occupational and educational information, in understanding their interests and abilities in relation to possible occupations, and in seeing connections between high school experience and future plans. An attempt was also made to discover how actively involved the parents had already been in their child's educational and occupational planning prior to the introduction of ECES and whether participation in the project had changed the extent of their involvement. Postcard reminders were sent to those parents who had not returned their completed questionnaires within two weeks of the initial mailing, and phone calls were made to arrange oral administration of the questionnaire to a representative sample of the parents who had not responded within a month of the initial mailing. A total of 110 parents, or 70% of the parents whose children were using ECES, completed the questionnaire. Ninety-five of these parents had returned their questionnaire, and a representative sample of 15 non-respondents were administered the questionnaire orally by project staff and professional interviewers recruited for the task. Answers of the respondents were compared with those from the sample of non-respondents in order to determine whether there were differences in response patterns.

The responses were analyzed in terms of the grade, ethnic background, future

educational plans, and sex of the experimental subjects. Characteristics of the responding group are presented in Table V-12. Frequency distributions of parent responses are contained in Appendix D.

Table V-12. Responding Parents in Terms of Ethnic Background, Grade Level, Future Educational Plans, and Sex of Child (N=95)

	Ethnic Background		Grade				Future Educ'l Plans		Sex	
	White	Black	9	10	11	12	Coll.	N-Coll.	Male	Female
N	70	25	30	24	21	20	67	28	53	42
% Responding of Total Category	70	45	71	62	51	59	66	52	68	54

As the table shows, responding parents were more likely to be those whose children are white ninth or tenth grade boys with plans for education beyond high school. Inspection of the groupings of non-respondents reveals that the parents of black, non-college-bound students and white, college-bound female students have the lowest response rate. Socioeconomic status, and the concomitant levels of verbal fluency and conceptualization, would lead one to expect more higher than lower socioeconomic level parents to return completed questionnaires. In fact, however, there were no significant differences in parental occupational or educational levels between the respondents and the sample of non-respondents (see Appendix D). The significant differences are found in parental involvement with the child's educational and occupational planning and in the extent of discussion with the child concerning his use of ECES (see Appendix D). Non-responding parents discussed the system with their children less than did the responding parents, and were not as heavily involved with their children's contact with high school counselors. More important educationally, non-responding parents felt that their children had received more help from ECES in discovering new occupational possibilities than did the responding parents. On all other

items on the Parent Questionnaire, the two groups gave comparable answers.

All 115 parents agreed that ECES can provide significant benefit for their children in providing useful occupational and educational information, seeing the connection between interests and abilities and occupational possibilities, helping them become better able to make career decisions, and recognizing the importance of high school performance for future plans. The majority of parents felt that the school should have a service similar to ECES as soon as possible and that their children should start using such a service early in their high school careers.

When the 95 responding parents were divided into the categories based on their ethnic background, child's grade level, future educational plans and sex, no significant differences in their responses were discovered. Due to the sample size involved, finer groupings on the basis of combined categories do not provide sufficient numbers of parent types to justify statistical comparisons. Unfortunately, lack of demographic data on the entire sample of non-responding parents prevents systematic comparisons with the total group of responding parents. Therefore, beyond the two differences that emerged in the comparison of respondents and the interviewed sample of non-respondents, no further generalizations can be made regarding differing parental reactions to ECES.

In response to an open-ended question concerning what they thought their child had gotten from the ECES program, the parents gave answers ranging from increased occupational and educational information to "confidence and hope".

The substance of the responses are as follows: 40 parents mentioned the benefit of occupational information, with 12 including specific mention of training and educational requirements or salary information, six specifying a narrowing of occupational choices, four mentioning a widening of vocational choices, and three, confirmation of their child's existing occupational choice. Others

mentioned unspecified increases in occupational information.

Twenty parents considered educational information to be what their children had received from their participation in the project. Only one mentioned confirmation of their child's educational choice, while eight stated widening of educational possibilities, and four mentioned narrowing of educational choices, especially of colleges considered by their children.

Three parents mentioned confirmation of interests and abilities and three more stated that ECES helped their children with plans for implementing their educational choices.

Five parents considered their children's increased awareness of the relationship between educational performance and future occupational requirements to be the important benefit. An increased sense of responsibility for their own futures was seen by eight parents to be what their children had gotten from their experience with the system, and seven other parents mentioned changes in their children's self-estimates as a result.

The parents of five underclassmen mentioned an increased interest in the field of computers.

Of the 95 responding parents, 18 said their children had received no benefit from their use of ECES. Parents of white, college-bound males outnumbered the other parents stating no benefit by more than two to one. Many of these parents said that their children had already had definite occupational and educational preferences and choices well in mind before their exposure to ECES and that, therefore, the system could offer little that they did not already know. One parent said that while ECES was a good idea, its information was not detailed enough for the sophistication of his college-bound son's occupational knowledge. All but one of these parents was of high occupational status. It may be that parents of higher socioeconomic levels perceive less utility in ECES than those

of lower levels, due to their tendencies to be more aware of educational and occupational possibilities and requirements and to transmit this knowledge and awareness to their own children.

In order to explore the possibility that socioeconomic status is an important variable involved in parental attitudes toward ECES, the 95 responding parents were divided into two groups according to father's occupational level. Those receiving ratings* of 1-3 were classified in the high socioeconomic group and those with ratings of 4-7 were placed in the low socioeconomic group. The high socioeconomic group includes occupations requiring high levels of educational training and the assumption of considerable amounts of responsibility. Engineers, physicians, school superintendents, accountants, registered nurses, ministers, and proprietors, managers, and business officials of businesses valued at $10,000 or more are included in the high group. The low socioeconomic group contains occupations requiring less education and responsibility than the high group. Dental hygienists, bank tellers, bookkeepers, factory foremen, mechanics, truck drivers, clerical and sales persons, minor business officials and proprietors of businesses valued at $5,000 to $10,000 are among those included in the low socioeconomic group. Frequency distributions for the two groups are included in Appendix D, and the questions yielding significant differences are presented in Table V-13.

(Insert Table V-13 about here)

Clear differences in parental attitudes toward ECES are revealed in Table V-13. These differences can be attributed to differences in parental involvement with children's educational and vocational planning. The higher level parents do not feel that their children's experience with ECES has increased their own involvement with their children's educational and vocational planning, or that ECES

*Hamburger, M. Realism and consistency in early adolescent aspirations and expectations. Unpublished doctoral dissertation, Teachers College, Columbia University, 1958.

Table V-13. Father's Occupational Level and Differences in Parental Response to ECES Parent Questionnaire (N=95)

Question

4 - Do you feel that you have become more involved in your child's educational or vocational planning since his or her participation in the ECES program?

	1-3	4-7
1. Definitely have not.	17	4
2. Probably have not.	17	4
3. Probably have.	18	15
4. Definitely have.	9	11

Chi Square	df	Significance Level
9.673	2	.01

Select one of the five possible answers that best indicates how much help you feel your son or daughter has received from the ECES program in each of the areas below.

5a - Seeing connection between his or her high school experience and future plans:

	1-3	4-7
1. None at all.	3	0
2. Hardly any help.	11	2
3. Some, but not much help.	22	8
4. A considerable amount of help.	18	15
5. A great deal of help.	5	6
- No response	2	3

Chi Square	df	Significance Level
5.081	1	.05

5c - Seeing connections between his or her interests and possible occupations:

	1-3	4-7
1. None at all.	2	0
2. Hardly any help.	8	0
3. Some, but not much help.	18	4
4. A considerable amount of help.	24	17
5. A great deal of help.	7	10
- No response	2	3

Chi Square	df	Significance Level
9.079	2	.05

5e - Discovering new occupational possibilities he or she might look into:

	1-3	4-7
1. None at all.	4	0
2. Hardly any help.	13	3
3. Some, but not much help.	20	5
4. A considerable amount of help.	15	11
5. A great deal of help.	7	12
- No response	2	3

Chi Square	df	Significance Level
10.807	2	.01

Table V-13 (cont.)

Question

5f - Discovering new educational possibilities he or she might look into:

	1-3	4-7
1. None at all.	14	0
2. Hardly any help.	10	4
3. Some, but not much help.	18	4
4. A considerable amount of help.	12	12
5. A great deal of help.	6	11
- No response	1	3

Chi Square	df	Significance Level
13.878	2	.001

5g - Making good decisions about what to do after high school:

	1-3	4-7
1. None at all.	15	2
2. Hardly any help.	10	0
3. Some, but not much help.	16	11
4. A considerable amount of help.	17	9
5. A great deal of help.	1	10
- No response	2	2

Chi Square	df	Significance Level
17.046	2	.001

6 - Do you feel your son or daughter is better able to make decisions about his or her career as a result of participating in the ECES program?

	1-3	4-7
1. Definitely is not.	6	0
2. Probably is not.	15	3
3. Probably is.	26	18
4. Definitely is.	14	13

Chi Square	df	Significance Level
7.957	2	.05

7f - How active have you been in obtaining private occupational testing and counseling for your son or daughter?

	1-3	4-7
1. Not active at all.	51	18
2. Not very active.	3	8
3. Fairly active.	0	3
4. Very active.	2	2
5. Extremely active.	3	0
- No response	2	3

Chi Square	df	Significance Level
8.001	1	.01

Table V-13 (cont.)

Question

10 - If a service similar to ECES were available, how soon would you want your school district to have it?

	1-3	4-7
1. I'm really not concerned.	7	0
2. I wouldn't want them to have it at all.	1	0
3. They should have it, sometime in the future.	8	2
4. They should try to get it fairly quickly.	13	9
5. They should get it as soon as possible.	30	23
- No response	2	0

Chi Square	df	Signficance Level
7.370	2	.05

11 - Suppose that the ECES service were available through an outside agency, not connected with the school. If expected use might average three hours per year over four years of high school, how much do you think the service would be worth per hour?

	1-3	4-7
1. Less than $5 per hour.	26	6
2. Between $5 and $10.	24	18
3. Between $11 and $20.	6	6
4. More than $20 per hour.	1	2
- No response	4	2

Chi Square	df	Significance Level
6.510	2	.05

has made their children better able to plan for the future, to the extent that the lower level parents do. This same difference of perceived utility of ECES extends to helping their children to see the connection between interests and possible occupations and between high school performance and future plans, and to discover new occupational and educational possibilities. Apparently, the lower occupational level parents feel that ECES had much to offer their children, while the higher occupational level parents feel less need for ECES for their children. The parents answering the question about involvement (see Question 4, Table V-13) in neutral or negative terms often included comments on their questionnaires such as "was already involved", and "have always been heavily involved with my child's planning for the future" and were of average or higher socioeconomic status. By contrast, the lower occupational level parent is less involved with his child's planning for the future, has less occupational and educational knowledge at his disposal, and is appreciative of outside help in these matters. This conclusion is supported by the fact that more lower level parents sought outside testing and counseling for their children than did the higher level parents. Interestingly, the parents presumably least able to afford the cost of a service such as ECES are willing to pay more for the service than the higher occupational level parents to whom the cost would be of less importance (Question 11, Table V-13).

It should be kept in mind, however, that, while real differences in attitudes toward ECES do exist at different socioeconomic levels, these differences are a matter of degree only. Very few parents at any level are strongly negative to the system. Lower status give more favorable ratings than higher status parents, but higher status parents are favorable too. It is true, however, that the kinds of information and experience offered by ECES are seen by parents as being of more unique value to children of lower socioeconomic families in which occupational and educational information is not as consistently supplied by the family as it is in

the more advantaged families. ECES is of specific and considerable value for less advantaged students and, when regularly available, should be able to add significantly to the educational and career development of youth from the lower socioeconomic levels.

Counselor Attitudes and Activity Patterns

Next to the students, the individuals thought to be most affected by and involved with ECES were the counselors. The system had been designed to fit in with the existing guidance programs, and it was hoped that the ECES would serve as an adjunct to the guidance program of the school.

In this school setting, the guidance department consisted of eight professionally trained guidance counselors. Two of the men were committed to significant amounts of administration, leaving the majority of the student counseling to six counselors, three men and three women. The counselors were assigned to specific groups of students designated on the basis of grade in school, sex, and to a certain extent, post-high school plans and high school curriculum.

Before ECES was ready for a tryout in a school setting, personnel working on the system had discussed ECES with the counselors. Ideas and suggestions were solicited from the counselors, and the counselors were invited to the laboratory to get a preview of the system. Because there were continual advances in the system until it was finally installed in the school, the first models shown to the counselors were not exactly the same as those components which finally were installed in the school.

There was one final period of orientation for counselors after it was placed in the school. Before any students began ECES, there were a few days in which the counselors were invited to experiment with the system and to get acquainted with the model that was operational. During this period a number of counselors

came in and participated on the system, taking a demonstration student number and going through the routines which the students would go through during the field test. These visits were designed to familiarize the counselors with the system and to help them deal with questions which might arise as a result of the students' participation on ECES. It was also thought that the better the counselors knew the system, the more incisive and insightful their suggestions and comments would be. Finally, counselors were oriented in the hope that they would have a positive attitude toward the system and its aims.

Data Gathered. To determine what effects ECES might have on the counselors' role and to find out what their attitudes would be toward ECES and its effects on students, three types of information were gathered from the counselors. First, the counselors completed a Pre-test Questionnaire which asked about the students' occupational planning and about the guidance program. Secondly, during the field test the counselors kept a running log of their contacts with the students. For each day's activities, the counselors would make brief notes on the Counselor Interaction Log. After the field test, a Group Interview was conducted with the counselors to obtain their attitudes in retrospect.

The Pre-test Questionnaire. This instrument inquired about impressions of students and specific aspects of occupations, students' occupational plans, their responsibility and effort in planning, the guidance program and the counselors' work, and the involvement of others in the students' plans. Of the 101 items, the majority (86) were multiple-choice items which asked the counselors to respond on a five-point scale, usually in terms of agreeing strongly at one extreme and disagreeing strongly at the other extreme. In addition to the multiple-choice items, there were three open-ended questions, two lists of activities to be listed in order of importance in counseling, and seven True-Uncertain-False questions. A copy of this questionnaire is found in Appendix E.

The questionnaire was completed by seven of the counseling members of the guidance department. High agreement was defined as at least four of the seven answering in the most extreme end of the scale, or six of the seven answering on the same side of the middle, in either the most extreme or the second most extreme position. Moderate agreement was defined as at least five of the seven counselors answering an item in the same direction. From the responses which satisfied these guidelines, a general description of the attitudes of these counselors can be derived. The items and the responses are presented in Table V-14.

(Insert Table V-14 about here)

Counselors' impressions of students showed the counselors to be in high agreement that students did not have a good working knowledge concerning the demand for people in occupations they were considering, and that few students have had actual working experience in the occupations being considered. The counselors thought that students make career plans without being aware of a great deal of information that they really should have in order to make the best decisions. There was moderate agreement among the counselors that although students feel responsible for choosing an occupation and for visiting colleges which they might like to attend, students do not feel responsible for making sure that their present training is preparing them for the next (career) step. Counselors felt that students have made definite plans in regard to taking post-high school or summer school training which leads to their preferred occupation, and to taking the necessary academic course work that leads to their preferred college major. Also, counselors believed that students put a good deal of time, thought, and effort into planning their career in general, and in choosing out-of-school activities. They did not see students as making definite plans in regard to getting qualified for a beginning or summer job in their preferred occupation, or in meeting possible financial needs in college by getting a part-time job.

Table V-14. Counselor Questionnaire Items Answered with Agreement among Counselors

No.	Content	Answer 1	2	3	4	5
	Most students generally have good working knowledge concerning the following specific aspects about the occupations they are considering:					
	Answer code: 1. Disagree strongly. 2. Disagree mildly. 3. Indifferent or other. 4. Agree mildly. 5. Agree strongly.					
10	The extent to which people in that occupation are in demand.	4	0	2	1	0
17	I can devote adequate time to the students I see to help with their career planning.	3	2	0	0	2
18	I feel adequately equipped to handly most of the questions the students have about occupational information.	0	1	0	6	0
19	I feel that the students make career plans without being aware of a great deal of information that they really should have in order to make the best decisions.	1	0	0	2	4
20	I feel that most of my counseling time centers around dispensing and obtaining information for students.	0	1	1	3	2
21	If students had outside access to appropriate and useful sources of information, then we could better use counseling time to work through career planning and decision-making.	1	0	0	2	4
22	Students find present sources of occupational information difficult to use, and generally not applicable to their own situations or experience.	0	1	1	4	1
25	Most students have had actual working experience in the occupations they are considering.	6	0	0	0	1
	Most students have made definite plans in the following areas:					
29	Plans for getting qualified for a beginning (or summer) job in the occupation they presently prefer.	1	4	1	0	1
30	Plans to take post-high school or summer school training which leads towards their preferred occupation.	1	0	0	2	3

Table V-14 (cont.)

No.	Content	Answer 1 2 3 4 5
34	Plans to meet possible financial needs in college by getting a part-time job.	1 4 0 0 1
35	Plans to take the necessary academic course work that leads to their preferred college major.	2 0 0 4 1
	Most students feel that the responsibility for making decisions in the following areas is primarily their own:	
39	Choosing an occupation.	0 2 0 4 1
42	Making sure their present training is preparing them for the next step.	0 5 0 2 0
46	Visiting the college they might like to attend.	1 1 0 2 3
	In general, most students put a good deal of time, thought and effort into planning for their futures in the following areas:	
47	Planning their career in general.	2 3 0 1 1
50	Choosing out-of-school activities.	1 4 1 0 1

Choose the statement below that best describes the situation.

Answer code: 1. Hardly at all.
2. To only some extent.
3. To an average extent.
4. To a pretty good extent.
5. To a great extent.

		Answer 1 2 3 4 5
62	To what extent has your school's guidance program met up to the students expectations?	0 0 1 5 0
63	To what extent has the counseling they have received in the area of educational planning been effective?	0 0 0 5 1
72	To what extent have you been able to help the students become aware of the important factors on which to base their educational decisions?	0 0 2 4 1
74	To what extent have you been able to help the student make better educational decisions?	0 2 0 5 0

Table V-14 (cont.)

No.	Content	Answer 1 2 3 4 5
	Now, using the statements below, consider each of the following persons, and indicate the extent that you think they are involved in the planning and decision-making of the average student's career.	
	Answer code: 1. Not involved. 2. Involved, but only to a small degree. 3. Somewhat involved. 4. Rather involved. 5. Very much involved.	
76	His father or male guardian.	0 0 2 2 3
77	His mother or female guardian.	0 0 2 1 4
78	His school counselors.	0 0 2 2 3
82	His ministers, priest, or rabbi.	0 6 0 1 0
83	Audio visual devices designed to help them make decisions.	1 5 0 0 0
84	Private guidance counselors, not part of your school.	1 4 0 0 0
85	The student himself.	0 0 0 3 4
	Answer code: 1. Unsatisfied. 2. Not very satisfied. 3. Somewhat satisfied. 4. Rather satisfied. 5. Very satisfied.	
87	How satisfied are you with this number of meetings?	4 2 0 0 0
	Answer code: 1. The student. 2. I did. 3. The teacher, or some other school official. 4. Other.	
88	Who arranged most of the meetings?	2 4 0 0 -

Table V-14 (cont.)

No.	Content	Answer True	Uncertain	False
	As students go on through school and to college, to work, etc., how do you see the decisions about alternatives open to them being made?			
94	The decisions will be made somehow or other.	5	2	0
95	The school will tell them what they should do.	0	2	5
96	Their parents will know what they should do.	0	6	1
100	They will be able to get help in thinking things through.	5	2	0

Answer code: 1. The same as now.
2. More emphasis.
3. Less emphasis.
4. I don't know.

No.	Content	Answer 1	2	3	4
101	What emphasis should there be on career and educational guidance?	0	7	0	0

Counselors felt that ministers, audio visual devices, or private guidance counselors were not very involved in the planning and decision-making of the average student's career. Counselors, fathers, and mothers were seen as being rather involved but the central person in the process is the student himself.

Counselors' impressions of counselors and the guidance program in which they worked showed them to be moderately agreed on a number of statements. Counselors felt that they cannot devote adequate time to the students they see to help them with their career planning. Counselors did feel adequately equipped to handle occupational information questions, and further, if the students had outside access to appropriate and useful sources of information, the counselors and students could make better use of counseling time to work through career planning and decision-making. Most of their counseling time centers around dispensing and obtaining information for students. The counselors believed that the students find present sources of occupational information difficult to use, and generally not applicable to their own situations or experience. In general, the counselors though the guidance program was meeting the students' expectations. Counseling in educational planning was seen as effective by them, and they believed that they have helped the students to become aware of important factors in educational decisions and to make better educational decisions. Counselors were not satisfied with the number of meetings they had with their students; the counselors had arranged most of the meetings. The counselors felt definitely that the school should not tell the students what to do, but they were uncertain whether or not the parents would know what the students should do. The counselors agreed that the decisions would be made somehow or other, and that the students would be able to get help in thinking things through.

On one questionnaire item there was unanimous agreement, reflecting a certainty and intensity of feeling. All counselors felt that there should be more emphasis on career and educational guidance.

Counselor Interaction Log. During the field test, the counselors kept a daily record of their activities as part of the study. This was part of the attempt to determine whether or not ECES had a discernible effect on the ways in which the students made use of the counselors' time. Based on a type of counselor log kept during the previous year, the Counselor Interaction Log asked counselors to record information on four aspects of their interviews.

The areas covered by the Log were: (a) Interview Characteristics, including the length of the interview, the type of session (educational, vocational, scheduling, or other), and the time aspect of the topics dealt with (past, present, or future); (b) Principal Interview Activity, indicating the most important and the second most important activities covered in the interview; (c) Direction of Outcome, the direction the interview was headed when it was terminated; and (d) Summary, an overall evaluation of the session on dimensions of (1) the use of the counselor's time by the student and (2) the student's progress in thinking about his future. A copy of the Counselor Interaction Log is found in Appendix F.

The data analysis was limited to the first interview between a given counselor and client after the beginning of the field study; second, third, or later interviews were not included in the tabulations. Only students designated as controls prior to the study were included in these comparisons. The interviews which met these criteria were 31 experimental and 30 control interviews, and the data on these interviews are presented in Table V-15.

(Insert Table V-15 about here)

Interview characteristics did not differentiate between the experimental and control subjects, as is shown in Table V-15. The average length of time that the counselor spent with an experimental subject (29.54 minutes) was not significantly different from that spent with the control subjects (28.68 minutes). There was a ratio of approximately two educational interviews for every one vocational

Table V-15. Counselor Interaction Log Frequencies for Initial Interview with Experimental and Control Students

Interview Characteristics		Experimental	Control
1. Length in minutes	Mean	29.54	28.68
	SD	12.97	11.01
	N	31	30
2. Type of session	Educ.	20	19
	Voc.	11	11
3. Topics dealt primarily with:	Past	1	0
	Present	3	4
	Future	27	24
Principal Interview Activity			
1. Obtaining information from student		7	3
2. Giving information to student		16	14
3. Understanding information		4	5
4. Considering further sources of information		2	0
5. Examining alternatives		2	3
6. Ranking alternatives		0	0
7. Clarifying attitudes and feelings		0	4
Direction of Outcome			
1. Expansion of alternatives		17	18
2. Narrowing of alternatives		3	3
3. Making of decisions		6	2
4. Planning how to implement decisions		4	6
Summary			
1. Use of counselor's time by student	Superior	6	13
$X^2 = 6.35$, $df = 2$, $p < .05$	Good	15	13
	Fair	8	2
	Poor	0	0
2. Student progress in thinking about his future	Superior	5	8
$X^2 = 4.49$, $df = 2$, $p < .15$	Good	10	14
	Fair	13	5
	Poor	1	1

interview for both experimental and control students. Similarly, the counselors believed that with both types of students, the major time orientation was toward future events.

Principal interview activity as rated by the counselors showed the most important activity in counseling with these students to be giving information to the student. The experimental students seemed to produce a higher number of interviews in which the principal activity was obtaining information from the student. (Could it be that the counselor was learning from the student?)

Direction of outcome asked the counselors to indicate what the student was doing in regard to decision-making when the interview was terminated. For both the experimental and control subjects, the counselors said that the overwhelming number of students were involved with expansion of alternatives at the conclusion of the interviews.

Summary ratings were an attempt to determine the counselors' opinions about the students' use of the counselors' time and the students' progress in thinking about their futures. These two summary items produced differences between the experimental and control groups. For both types of summary ratings, the control students seemed to be more highly rated than were the experimental students. As shown in Table V-15, control students were more likely to be rated superior or good on these items than were the experimental students.

Group Interview with the Counselors. On the last day of school the school counselors were called together to discuss the ECES and its effects on their own work, on the guidance program, and on the plans of their students. Five of the seven counselors were present, and the format of the meeting was purposely made informal, with a minimum of structure to provide free expression of feelings and reactions. All of the counselors were familiar with the system and all had worked with at least some students who had been experimental subjects, i.e., students

who had participated in the system.

ECES effects on the counselors were thought to be minimal. Each counselor had only a few students on the system, so that the activities of these students did not change the individual counselor's total pattern of activities. Perhaps more important than the number of students the counselors had on the system was their deliberate intention not to pry into the students' reactions to or experiences with ECES. The counselors had interpreted "field test" to mean a trial of ECES in which the effects of the system were to be evaluated, with a minimum of counselor interference or involvement. (This is not exactly what the evaluation staff had in mind, and there seems to have been some problem in communication in this respect.)

Although the counselors did not report sweeping change in their activities, they did report that some students came to see them expressly to discuss the student's work on ECES. Thus, the effects of the system on the students' behavior must have had some effect on what the counselors did. Effects on the students, as seen by the counselors, will be discussed in more detail in a later section.

ECES effects on other guidance activities were mentioned specifically in regard to the use of the occupational library. Counselors, who can observe the library from their offices, reported increased use of the library on the part of the students, although there were no special efforts or other guidance programs which might have produced this. This increase was not limited to ECES students, who may have been following up some leads that they had taken from the system. Instead, more students, both ECES and non-ECES, were looking up information and reading about occupations. Because the college and technical school catalog library is not so accessible to observation, it was not known whether this increased interest was shown there also or not. It was conjectured that some of the occupational library use on the part of the non-ECES students was compensatory.

In any event, all of this increased activity was student initiated and seemed to be related to the initiation of the ECES field study.

ECES effects on students' plans were the most specific and in some cases the most dramatic results, according to the counselors. Since the system is directed toward occupational and educational exploration by the students, it is to be expected that this would be the area in which the results would be most evident. What is of particular relevance here is the counselors' assessment of ECES effects on students' plans.

From counselors who initially reported they had no ECES feedback, there came accounts of students who had started with specific, definite goals and after the ECES experience had extended the range of the opportunities to be considered. Another counselor told of a student who had postponed the planning of his Fall schedule because he "needed to talk with the computer some more first". Some students changed their attitudes about going to college. Beginning with uncritical plans which included college but no consideration of some of the special problems that might be faced, some students were thinking in more aware, enlightened terms, working on how they might avoid some of the difficulties of getting into and staying in college.

One counselor had kept systematic notes on his students who were ECES students. From 16 students, he noted that four students had changed their plans to more education or higher level education, five had developed better motivation and changed to wiser choices of occupational goals, six had experienced no change in their plans (two of these choices had been rated poor; four had not been evaluated), and one student had been uncertain before ECES and remained essentially undecided. The experience of this counselor would suggest that more than half of the students who were on ECES experienced some movement in their occupational plans, and that this change was in a positive direction.

The impression of the counselors was that ECES was an asset to a guidance program, and that it had real potential in assisting the guidance programs in the schools. The counselors expressed a desire to see the ECES continued, indicated they thought it would be good for counselors in the future to be more actively involved in the use of systems like ECES.

In summary, the impressions of the counselors suggest that they did not perceive ECES as producing extensive or sweeping changes in their own work patterns. The effects of the system were seen in the increased activities in other aspects of the guidance program, specifically, in the use of the occupational library. The most graphic effects were seen in the plans and occupational outlooks of the students, with the changes and new considerations being primarily in a positive direction, in the direction of higher and more appropriate occupational plans and goals.

Teacher Reports of Student Attitudes toward ECES

The teachers of Montclair High School were given a brief questionnaire in order to determine their evaluation of the experimental subjects' attitudes toward ECES. The questionnaire was designed in such a way as to ascertain the extent of each teacher's contact with students who had been using the system. Those teachers who had not talked with any of the students in the experimental group could so indicate, a procedure which made possible a rough estimate of teacher-ECES student contact. The teacher was asked to rate experimental group students with whom he had discussed ECES in terms of the students' enthusiasm for the system, their awareness of the connection between their interests, abilities, academic performance and future occupational and/or educational possibilities, and the expansion of their occupational and educational information. A scale of 1-5 was used with a rating of five representing the most favorable reaction.

The one-page questionnaire was sent to the total of 128 teachers of grades

nine through twelve. Of the 57 teachers who returned their completed questionnaires, 24 or 42% reported having discussed ECES with students who were using the system. This represents 18% of the total number of teachers in the high school, and presumably the majority who discussed the project with students. No additional questionnaires or reminders were sent to the non-responding teachers. Of the 24 responding teachers reporting contact with ECES subjects, 17 were homeroom teachers and seven were teachers with no homeroom assignments. Homeroom teachers are responsible for taking attendance at the beginning of school and for handing out notification slips and messages to students in their homerooms. Thus, they might be expected to have regular contact with ECES subjects as they passed out "call slips" reminding students of their scheduled sessions with ECES. However, only 47% of the responding homeroom teachers who had ECES subjects in their homerooms reported having spoken with students about their use of the system. This may be explained by the fact that homeroom periods, except when extended due to school-planned special activities, are only about ten minutes long and may be the only contact with the ECES students during the day.

Both the homeroom and non-homeroom teachers reporting discussions with ECES subjects spoke with an average of four students apiece. However, the homeroom teachers apparently felt that the questions contained in the Teacher Questionnaire called for evaluation of the students in terms that were too specific for the depth of their contact. They tended to omit more ratings than did the seven teachers without homeroom assignments. In addition, the homeroom teachers reported less student enthusiasm for ECES than did the seven other teachers. This lower rating may be explained by the fact that homeroom teachers would be more likely than the other teachers to be aware of any negative reactions on the part of students receiving call slips in their homerooms, even if these students did not actually discuss their use of the system. Due to the small number of teachers

reporting contact with ECES students, the response patterns of the homeroom teachers and of the other teachers could not be statistically compared in order to determine whether these differences were significant. However, the greatest discrepancy in ratings between the two groups of teachers occurred on four questions dealing with the students' plans for obtaining occupational information, their knowledge of specific occupational information, and their awareness and consideration of the relationship between their interests and abilities and the characteristics and educational requirements of specific occupations. Homeroom teachers consistently rated students lower on these questions than did the other seven teachers. Frequency distributions and means of the responses from the Teacher Questionnaire are contained in Table V-16. A copy of the Questionnaire is found in Appendix G.

Table V-16. Frequency Distributions and Means of Responses to Teacher Questionnaire (N=24)

	Homeroom Teachers, N=17							Other Teachers, N=7						
	Response							Response						
Question	0	1	2	3	4	5	Mean	0	1	2	3	4	5	Mean
1	0	2	11	2	2	0	2.2	0	1	2	2	2	0	2.7
2	0	2	4	3	5	3	3.2	0	0	1	0	3	3	4.1
3.	1	6	2	1	7	0	2.4	0	0	1	2	2	2	3.7
4	8	1	2	2	2	2	1.7	0	1	0	2	2	2	3.6
5	5	1	4	4	0	3	2.1	0	1	0	2	3	1	3.4
6	4	2	2	3	6	0	2.3	0	0	0	4	2	1	3.6
7	7	2	2	3	3	0	1.6	0	0	0	5	1	1	3.4
8	4	6	2	2	3	0	1.6	0	0	0	5	1	1	3.4
9	5	4	2	2	4	0	1.8	0	0	0	3	1	3	4.0
10	5	2	1	4	5	0	2.1	0	0	1	2	3	1	3.6
				Total Mean			2.1							3.6

The only conclusions that can be drawn from the data provided by the Teacher Questionnaire are that homeroom teachers respond somewhat less favorably than do other responding teachers, that only a small portion of the total teacher population of Montclair High School had system-specific contact with ECES subjects

during the 11 weeks of field trial, and that this contact was limited to only a few students. Due to the limited data, it would not be appropriate to evaluate the impact of ECES on the students on the basis of teacher reports. Although the total number of responding teachers reported only mild impact of ECES on the students (total mean of all ratings = 2.5), the overall rating of student enthusiasm for the system was 4, meaning "good". Whether a representative sample of student users formed the basis of these reactions is debatable.

Perhaps at this point, taking into account the fact that the field trial was of such relatively limited duration, the most interesting data which can be reported are the anecdotal comments made by various teachers about their contact with ECES subjects. One business teacher reported that an eleventh grade girl in some of his classes had, prior to her use of ECES, evinced little or no interest in her business curriculum. After her reported exploration of the occupation of secretary on the system, her interest in her courses increased. Another teacher reported increased interest in computer programming on the part of a tenth grade boy using ECES. Still another teacher mentioned a girl who had been considering nursing as a career who, after exploring "professional nurse" on the system, decided that the job duties and the educational requirements were not really what she had envisioned. She did decide, however, that the "service" field was of interest to her and that she would continue to explore other occupations in that field. From about eight reports such as these one may be justified in stating that, for some subjects, an increased sense of the relevance of course work to future occupation, an awareness of specific occupational information leading to more realistic appraisal of one's interest in an occupation, and the utility of occupational classification, can result from use of ECES.

Chapter VI

SUMMARY: CONCLUSIONS AND IMPLICATIONS

The field trial of the experimental Educational and Career Exploration System sought to determine the feasibility and the effectiveness of the system. Prior to this field study, attention had been directed toward methodological issues and the development of a prototype. The objective was to provide a computer-supported system through which an individual could engage in fruitful exploration of his capacities and interests and of the educational and vocational world within which his career unfolds.

With the development of what appeared to be adequate hardware, a procedure for storing information, a series of appropriate data bases, and a means by which individuals could engage in a meaningful exchange with the data base, basic questions were then raised as to how well it would work in the field, what effects it would have on the users, and what reactions its use would evoke from students, counselors, teachers, and parents. The field trial was designed to obtain at least initial answers to these and related questions.

The procedures and data described in the preceding chapters presented detailed information concerning these points. Following is a brief summary of the main findings and their implications.

Question 1. Does the system function adequately?

The field trial demonstrated that the hardware can relatively easily be installed and maintained in a community high school. It requires little more than booth or carrel space within which students can operate the terminals. After the original installation and removal of the inevitable bugs which accompany a first field trial, the equipment required little special maintenance.

The field trial also demonstrated that the ECES procedures can be used in

an ongoing school guidance program, the time spent at the terminals being scheduled without interference with the usual class work and other school activities.

Question 2. Was the ECES system appropriate to the target population?

Chapter V presents evidence justifying the conclusion that the ECES system was applicable and appropriate for students with a fairly wide range of age, grade, and intellectual levels and of socioeconomic backgrounds. After an initial orientation, most students could engage in the process with little if any help from the monitor. In the field trial there were two full-time monitors, but much of their time was spent in data-gathering for the field trial itself, in consultation with school personnel about the system, in special scheduling, and in being available to make sure that everything went smoothly. In an actual operational situation, in which counselors are available to help students utilize the system effectively just as they now use the occupational library, the amount of direct monitoring required for ordinary day-by-day use should be much less. The incidence of "getting lost" in the system and of needing help from a monitor to get out of the difficulty is sufficiently great, however, to require that help be readily available. This could be provided by a clerk or receptionist in the guidance office, by the school librarian, or by a counselor in an adjacent office.

There was clearcut evidence that students could readily use the system and that they did use it with a good deal of enthusiasm. One advantage of the system is that it does not require a specified amount of time and students can use it as much as schedules permit, depending upon their motivation and perceived need.

The data on the number of sessions reveal that the system is appropriate over the entire range of secondary school grades and for students with all types of educational plans. ECES was used somewhat oftener by male than by female students and somewhat less by twelfth-graders than the earlier grades, possibly because it came too late in the school year to be of much direct exploratory value for the

group about ready to graduate. Black students used the system as much as did white students. The high users were the ninth and tenth-grade, non-college-bound males and the lowest users were the black, non-college-bound females.

In addition, the low absenteeism rate during the project and the waiting list for use of the system during the extra hour at the end of each school day provide further evidence that the students were interested and involved, and that their use of the system was self-motivated rather than merely the result of an experiment. Additional evidence of their positive attitudes toward the system itself will be presented later.

Question 3. What effect did use of the system have upon the vocational development of the students?

As described in Chapter III, six Vocational Development Scales were derived from the Student Questionnaire administered both at the beginning and at the end of the field trial. These scales were as follows:

1. Vocational and Educational Planning Maturity (M)
2. Knowledge of Decision-Making Principles (DP)
3. Amount of Decision-Making Information, #1 (DI1)
4. Amount of Decision-Making Information, #2 (DI2)
5. Quality of Decision-Making Information (DI3)
6. Acceptance of Responsibility for Decisions (RD)

These scales were used to test the effect of the ECES on vocational development by comparing post-trial differences between the experimental and control groups, with their own pre-trial scores held constant through analysis of covariance. The major findings were as follows:

a. One scale showed a general positive increase in favor of the experimental group. This was the decision-making information scale which measured how much specific knowledge the student thought he had concerning certain

aspects of occupations (Scale DI1). Except for the twelfth-grade and black students, the experimental students attained higher scores on this scale than did the control. The lack of difference for the twelfth-grade and black student groups may be due to the fact that the twelfth graders in general and the black, non-college-bound, female students were also the low-utilization groups.

b. Few differences were found on Scale DI2, which measured the amount of useful vocational and educational information the student had obtained from a variety of sources, and on Scale RD, the scale which measured the student's acceptance of responsibility for decision-making. On Scale DI2, decision-making information, there was a steady progression from grades nine through twelve, and on RD, the responsibility for decision scale, the college-bound students exhibited the higher scores. However, there were no significant experimental-control differences on these variables.

c. As described in Chapter IV, measures of realism of vocational and educational self-concept were obtained by computing discrepancy scores between various combinations of the following variables: self, best-liked occupation, least-liked occupation, and ideal self. Comparisons between experimental and control groups and among the various subgroups based upon race, future plans, sex, and grade level revealed no significant differences.

d. Although the ECES system was not designed to change student's attitudes toward sources of job satisfaction, possible effects on the work attitudes as measured by the Work Values Inventory were studied. Comparisons showed that non-college-bound students considered Work Surroundings significantly more important than did college-bound students. Emphasis on Job Prestige declined from the pre-trial to the post-trial measures for the ninth, tenth, and eleventh grades in the case of the experimental subjects, suggesting

a desirable change in focus, whereas the control subjects showed increases in grades nine and eleven and decreases in grades ten and twelve.

Economic Returns as a work value declined for college-bound students in the experimental group and for non-college-bound in the control group. With respect to Variety as a work value, there were changes from pre- to post-trial, depending upon the sex and the future plans of the subjects, with college-bound males showing no change and non-college-bound males showing an increase.

Question 3. What did the students who used the system think of it?

At the end of the eleven weeks of the field trial, the experimental subjects were asked to complete a special questionnaire designed to survey their attitudes toward their experience with ECES and their evaluation of its impact upon their own development.

The results of this "consumer attitude survey" were quite revealing. The general reaction to ECES was quite favorable, with a majority of the experimental subjects indicating that they liked the system and that other students shared their evaluation. As shown in Appendix B, 75% or more of the students reported that ECES was: helpful in their educational plans,

helpful in their vocational plans,

lived up to their expectations,

helped them understand their strengths and weaknesses in relation to educational goals,

revealed more areas of possible educational and vocational alternatives.

Of the subjects, 60% said they would recommend its use if there were a charge and 78% said their parents would be willing to pay a reasonable fee to have it available for them.

Although there were no significant differences among student subgroups in these general, overall attitudes toward the system itself, there were some noteworthy subgroup differences which may throw light on the value of the system in terms of students' expectations and readiness to use such a system. Following are some of the most interesting findings:

a. Although most of the students disagreed with the statement that ECES played a directive role, 44% of the black students, as compared with 21% of the white students, felt that the system had tried to choose an occupation for them. Also, more of the non-college-bound students indicated that they felt that ECES tried to choose a major for them than did the college-bound students.

b. There was positive, although not striking, evidence that the students using ECES felt that its use had facilitated their vocational and educational plans. For example, 64% said that they were more definite about their plans than before using the system; this effect seemed particularly strong among the ninth-grade students. Only 51 of 140 students reported that they were definite about their plans before using ECES and 95 of them reported that their plans were definite after use of ECES. Nearly 75% rated ECES as helpful in educational and occupational planning, and again the results were strongest in the ninth grade.

Use of the system seemed of particular value to the non-college-bound students in helping them understand their strengths and weaknesses in relation to their occupational goals; 112 of 140 experimental students gave a positive response on this question. In addition, ninth- and tenth-graders were particularly positive in reporting the extent to which ECES made them feel more aware of their possible educational alternatives and the extent to which ECES helped them make better educational decisions.

c. There were some subgroup differences as to how best to use ECES. Most students believed that ECES would be useful for all groups, both college- and non-college-bound, and most felt that use of ECES should begin in the eighth or ninth grade. They estimated that sessions of between 45 and 60 minutes would be about the right time for a sitting and said that, if the system were available all year long, they would like to be scheduled at least once a week for use of the system, with the ninth- and eleventh-grade students and the non-college-bound students preferring more frequent use than the tenth- and twelfth-graders and the college-bound students.

d. Another of the questions dealt with the students' attitudes as to the particular role which ECES can play in conjunction with the guidance counselor. The results were rather uniformly in favor of needing both the counselor and ECES rather than differentiating their functions. However, ECES was rated as a better source of help than the counselor on the following items: understand your interests better, understand your abilities better, get useful facts about occupations, see the relationships between your interests and possible occupations, discover new educational possibilities to look into, discover new occupational possibilities to look into. On the other hand, the counselor was highly preferred as the source to which to go in order to "understand your individual situation and needs better". In general, students seemed to attribute an integrative and personalized role to the counselor, while they saw ECES as providing the kinds of data with which the counselor and they could work.

Question 4. <u>Were there changes in students' attitudes toward ECES during the field trial</u>?

At the end of each session, each student filled out a Student Reaction Form, which dealt with experiences during that session. In order to survey the students'

attitudes over a number of sessions, responses to the Student Reaction Form for the first, third, fifth, and seventh sessions were analyzed. Within this series of sessions, it can be generalized that the first session was for general orientation, the third and fifth sessions represented considerable progress and help in occupational and educational exploration, and by the seventh session there was a leveling off of the amount of additional help provided. Even at the seventh session, however, nearly three-fourths of the students reported that the information obtained that session on the screen, typewriter, and booklet was either fairly helpful or very helpful. Help in getting useful facts about occupations (the help which elsewhere was reported as being a primary value of ECES) was the one in which there was a rapid rise in the report of help and consistency across groups as to its value.

As in the general results on the post-test questionnaire, the individual session Student Reaction Form results showed that the non-college-bound students reported more help than the college-bound at first, but that the difference lessened by the end of the seventh session. The differences appeared particularly with respect to the system's helping them find out about what high school majors to consider.

In summary, the study of the trends in student attitudes toward use of ECES revealed that the majority of students enjoyed working with the system, found the material easy to read and to understand, and felt that they had made progress in thinking about their future as a result of each session with ECES. The non-college-bound students received more help than the college-bound in finding out about courses they might take in future education or training, about high school majors they should consider, and about information about colleges and vocational schools they might like to consider. The non-college-bound also reported more help than did the college-bound in seeing the relationship between their interests

and abilities and possible occupations. There was some suggestion that the black students had more difficulty at the beginning in using the system, but as they became more accustomed to the system, the black students frequently reported greater help than did the white students. Similarly, the male students experienced more difficulty than did the female students in understanding the Manual, but reported that they had received more educational information than did the female. In general, the earlier grade levels, ninth and tenth grade, were more consistent in their reported help during the series of session.

Question 5. What did the parents think about ECES?

Information about parental attitudes was received from a parent questionnaire filled out by 115 parents and by anecdotal reports from interviews with a sample of the non-respondents. The results of this survey revealed that parents considered ECES to be of benefit in providing information, in helping students see connections between interests and occupations, in helping their children to make better career decisions, and to recognize the importance of high school performance.

There were no basic differences in the parents' responses connected with ethnic background or the grade level of the student. The parents agreed on the value of the occupational and educational information which was available and also with potential use in clarifying plans.

Eighteen of the 95 responding parents said that their children had received no benefits from ECES, as they had perceived it. Least value was expressed by parents of white, college-bound males, who presumably already had definite occupational and educational preferences and choices. It should be noticed that this is the group which themselves reported least perceived value.

A test of differences in parents' attitudes depending on the father's occupational level reveals some differences, with the lower-level parents feeling that

ECES had much to offer their children and that it added significantly to their parental involvement. In contrast, the higher-level parents were more likely to feel that they already have involvement and their children already have adequate information. The differences, however, are differences in degree at the positive end of the scale rather than negative attitudes on the part of the higher-level parents. It is quite significant, however, that ECES had particular value for youth from the lower socioeconomic levels. Following are a few striking findings from The Parent Questionnaire:

a. Over half of the parents reported that there was either regular or considerable discussion with their children concerning ECES.
b. About 60% reported that they had become more involved in their child's planning since participation in ECES.
c. Like their children, the parents considered ECES particularly useful in getting useful facts about occupations and in seeing connections between personal characteristics and occupational possibilities.
d. About three-fourths of the parents felt that their children were able to make better career decisions as a result of ECES.
e. Most parents felt that ECES should be available in the seventh, eighth, ninth, or tenth grades.
f. Almost eight out of ten parents believed that if ECES were available they would want their school district to get it as soon as possible.
g. Almost 70% of the parents felt that there should be more emphasis on educational and vocational guidance in high school than there is now.

Question 6. What were the school counselors' attitudes toward ECES, based on the field trial experience?

Since ECES is designed to be used as part of a total school guidance program, it was important to obtain the reactions of the counselors in the tryout school.

This was done by administering a pre-test counselor questionnaire which asked the students' occupational planning and about the guidance program itself. In addition, during the field test, counselors kept a running log of their contacts with the students. Finally, after the field trial, a group interview was conducted with the counselors to ascertain their experience and to obtain their evaluations. From these data the following conclusions can be drawn:

a. The counselors perceived students as not having a good working knowledge about occupations and as making plans without being aware of the information which is needed for wise planning. Students' plans are more definite concerning subsequent training than about occupational plans. The counselors considered themselves adequately equipped, but that they spend most of their time dispensing information rather than becoming involved in career planning and decision-making. Counselors felt that they had inadequate time to provide the necessary help. All the counselors felt that there should be more emphasis on career and educational guidance than was now possible.

b. It is difficult to draw very firm conclusions about counselor activity patterns from the rather scattered data from the Counselor Interaction Log. There appeared to be no difference between the experimental and control subjects on the average length of interview time or in the ratio of education-to vocation-focused interviews. For both groups, giving information to students was the principal interview activity and for both groups the outcome of the interviews was judged to be an expansion of the alternatives under consideration. On a summary rating by the counselor of the use of his time by the student and the student's progress in thinking about his future, the control group received higher ratings than the experimental students.

c. During the group interview at the conclusion of the field trial, the counselors reported that the presence of ECES had had little effect on their own activities. However, they did report anecdotal incidents of students who had realistically changed plans or had raised their educational goals. One of the counselors who had kept a fairly systematic record, estimated that more than half of his students who were on ECES experienced some movement in their occupational plans and in a positive direction. In summary, the counselors' reports suggest that they did not perceive the three-month use of ECES as producing extensive changes in their own work patterns, that the effect of the system was seen in increased activities in other aspects of the guidance program, particularly in the use of the occupational library, and that the most visible outcomes were seen in the occupational and educational plans of the students, usually in the direction of higher and more appropriate occupational plans and goals.

Question 7. What were the attitudes of the classroom teachers toward ECES?

Information was obtained concerning teacher reports of student attitudes toward the system and also about the teachers' estimates of the vocational and educational planning activities of the students by means of a brief questionnaire sent to the teachers. The data, however, are difficult to interpret due to the small number of observations made by any one teacher. The questionnaire data themselves did not permit an evaluation of the impact of ECES on the students on the basis of teacher reports. Again, anecdotal reports, as reported by the ECES monitor and project staff members who had frequent informal contacts with teachers, attested to the effect of the use of ECES on students' plans, particularly an increased sense of the relevance of course work to future occupation, an awareness of specific occupational information leading to more realistic appraisal of interest

in an occupation, and the value of a knowledge of the world of work.

Overall Summary and Conclusions

From this initial, short-term trial of the Educational and Career Exploration System in a secondary school containing a wide socioeconomic range of students, the following general conclusions can be drawn:

1. The underlying rationale of the system with its opportunities for the student to engage in self-exploration, to obtain accurate information about the educational and occupational worlds, to study the relationship between educational experiences and vocational implications, and to do educational and vocational planning in a more systematic way appears to be an appropriate one for the adolescent stage of vocational development.
2. ECES is useful with a wide range of students, but particularly for the early years of high school. It was found to be useful for both college-bound and non-college-bound students and for both males and females.
3. The field study demonstrated that measures of vocational maturity could be obtained from student questionnaire data. However, changes in vocational development, as measured by most of the developed scales, did not occur during the short period elapsing between the pre-test and the post-test in this field trial.
4. Evidence of the impact of the use of the system on the students must therefore come from anecdotal reports of counselors, teachers, and parents, and from self-reports of the students. From these it can be safely inferred that the major outcomes of the use of ECES were in the areas of improved occupational information, increased understanding of the relationship between school subjects and occupational possibilities, and better awareness of their own strengths and weaknesses in relation to educational and occupational goals.

5. The students themselves found the system relatively easy to use and, after an initial orientation, they were able to explore the system with a minimum of supervision. However, the system is not self-administering and there should be monitoring support present either in the workroom or on call in an adjacent reception, library, or counseling space.

Appendix A

DISTRIBUTIONS OF RESPONSES OF EXPERIMENTAL AND CONTROL GROUPS ON STUDENT POST-TRIAL QUESTIONNAIRE, PART 1, BY GRADE, RACE, FUTURE PLANS, AND SEX

1. Which one of the following statements best describes your attitude toward school work?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I do the very best I can in all courses.	49	44	15	14	13	10	9	10	12	10
2. I do the best I can in some courses; in others I do just enough to get by	73	86	20	17	18	27	22	23	13	19
3. I usually do only enough to get along in each course.	16	21	3	5	4	4	6	6	3	6
4. Frankly, I just don't care how well I do in any of the courses.	1	0	1	0	0	0	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	31	31	18	13	32	26	17	18	23	16	26	28
2.	49	50	24	36	53	68	20	18	36	43	37	43
3.	12	13	4	8	9	9	7	12	11	13	5	8
4.	1	0	0	0	0	0	1	0	0	0	1	0

2. Next year if you are in school (or college) you will probably:

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Get very low grades (probably fail a subject or two).	1	2	1	1	0	0	0	1	0	0
2. Get below average grades (below "C" average but passing in all).	4	6	0	0	1	2	1	1	2	3
3. Get average grades.	54	51	10	10	18	13	17	16	9	12
4. Get somewhat above average grades (mostly B's).	75	78	27	21	15	21	17	20	16	16
5. Get quite high grades (nearly all A's).	4	10	1	2	1	4	1	1	1	3
- No response	1	4	0	2	0	1	1	0	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	1	1	0	1	0	0	1	2	0	1	1	1
2.	2	3	2	3	2	3	2	3	2	5	2	1
3.	33	25	21	26	32	24	22	27	31	20	23	31
4.	52	54	23	24	58	63	17	15	34	36	41	42
5.	4	8	0	2	2	10	2	0	2	7	2	3
-	1	3	0	1	0	3	1	1	1	3	0	1

3. When you get a job you will probably:

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Have a hard time holding the job unless I get some "breaks".	0	1	0	0	0	1	0	0	0	0
2. Be a poor worker, but willing to try.	1	0	0	0	0	0	1	0	0	0
3. Be a fair worker.	5	6	3	1	1	3	1	1	0	1
4. Be a good worker, but not extremely skilled.	73	64	18	16	20	11	22	22	13	15
5. Be extremely skilled at it.	59	78	18	17	13	26	13	16	15	19
- No response	1	2	0	2	1	0	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	0	1	0	0	0	0	0	1	0	1	0	0
2.	1	0	0	0	1	0	0	0	0	0	1	0
3.	3	1	2	5	1	4	4	2	1	2	4	4
4.	48	41	25	23	51	42	22	22	37	29	36	35
5.	40	50	19	28	40	56	19	22	31	38	28	40
-	1	1	0	1	1	1	0	1	1	2	0	0

4. If it were left to your choice, and you could afford it, which one of the following statements best describes the highest level of education you would <u>try</u> to attain?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Something less than high school graduation.	0	0	0	0	0	0	0	0	0	0
2. High school graduation.	0	2	0	0	0	2	0	0	0	0
3. Work for a company which will train me on the job or send me to school.	4	14	2	3	1	4	1	5	0	2
4. Enter the military service and go to school there.	2	6	1	1	1	1	0	3	0	1
5. Attend a technical, trade or business school which requires less than two years to complete.	10	6	2	1	4	1	2	1	2	3
6. Attend a technical, trade or business school which requires more than two years to complete.	10	10	2	2	2	2	4	3	2	3
7. Attend some college but not graduate.	0	3	0	1	0	1	0	0	0	1
8. Complete a junior college program.	3	5	0	0	0	2	3	3	0	0
9. College graduation (Bachelor's degree).	52	42	13	16	12	10	17	10	10	6
10. Something beyond a Bachelor's degree such as a degree in law, medicine, dentistry, or an M.A. or Ph.D.	56	61	18	11	14	18	10	14	14	18
- No response	2	2	1	1	1	0	0	0	0	1

4. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	0	0	0	0	0	0	0	0	0	0	0	0
2.	0	1	0	1	0	0	0	2	0	1	0	1
3.	1	7	3	7	1	4	3	10	1	2	3	12
4.	1	3	1	3	0	3	2	3	2	6	0	0
5.	8	3	2	3	1	2	9	4	4	3	6	3
6.	6	4	4	6	6	4	4	6	9	3	1	7
7.	0	0	0	3	0	2	0	1	0	2	0	1
8.	2	3	1	2	1	1	2	4	2	3	1	2
9.	37	28	15	14	38	33	14	9	22	15	30	27
10.	36	43	20	18	47	52	9	9	29	35	27	26
-	2	2	0	0	0	2	2	0	1	2	1	0

5. Realistically, considering your abilities, your financial resources, family problems, etc., what is the highest level of education you <u>expect</u> to attain?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Something less than high school graduation.	1	0	0	0	0	0	1	0	0	0
2. High school graudation.	5	10	3	1	0	3	1	3	1	3
3. Work for a company which will train me on the job or send me to school.	4	7	1	2	1	2	1	2	1	1
4. Enter the military service and go to school there.	0	5	0	0	0	2	0	2	0	1
5. Attend a technical, trade or business school which requires less than two years to complete.	9	12	1	1	2	2	4	2	2	7
6. Attend a technical, trade or business school which requires more than two years to complete.	8	7	0	1	2	2	4	3	2	1
7. Attend some college but not graduate.	1	6	0	3	0	1	0	0	1	2
8. Complete a junior college program.	9	10	3	3	0	3	4	4	2	0
9. College graduation (Bachelor's degree).	65	56	23	19	19	12	14	17	9	8
10. Something beyond a Bachelor's degree such as a degree in law, medicine, dentistry, or an M.A. or Ph.D.	33	36	7	5	9	14	8	6	9	11
- No response	4	2	1	1	2	0	0	0	1	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	0	0	1	0	0	0	1	0	0	0	1	0
2.	2	4	3	6	0	3	5	7	2	2	3	8
3.	3	4	1	3	1	4	3	3	2	0	2	7
4.	0	3	0	2	0	3	0	2	0	4	0	1
5.	5	5	4	7	2	4	7	8	3	6	6	6
6.	7	2	1	5	6	1	2	6	5	2	3	5
7.	0	1	1	5	1	4	0	2	0	3	1	3
8.	4	6	5	4	6	4	3	6	5	4	4	6
9.	47	41	18	15	48	45	17	11	34	25	31	31
10.	22	26	11	10	29	33	4	3	17	24	16	12
-	3	2	1	0	1	2	3	0	2	2	2	0

6. Which one of the following statements best describes the type of occupation which you would most like to follow most of your life? (If you are a girl, skip questions 6 and 7 and go to question 8.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I can't say at this time.	7	5	0	2	3	1	3	1	1	1
2. Farm owner and/or manager.	0	1	0	1	0	0	0	0	0	0
3. Farm foreman.	0	0	0	0	0	0	0	0	0	0
4. Farm worker.	0	0	0	0	0	0	0	0	0	0
5. Workman or laborer - such as factory or construction worker, fisherman, filling station attendant, janitor.	0	0	0	0	0	0	0	0	0	0
6. Private household worker - such as servant, butler, etc.	0	0	0	0	0	0	0	0	0	0
7. Protective worker - such as policeman, detective, sheriff, fireman.	1	1	1	0	0	0	0	1	0	0
8. Service worker - such as barber, beautician, waiter, mail carrier.	0	1	0	0	0	1	0	0	0	0
9. Semi-skilled worker - such as factory machine operator, truck driver, meatcutter.	2	0	0	0	0	0	1	0	1	0
10. Skilled worker or foreman - such as a baker, carpenter, electrician, mechanic, plumber, plasterer, tailor, foreman in a factory or mine (but not on a farm).	1	1	0	0	1	0	0	0	0	1
11. Clerical worker - such as bank teller, bookkeeper, sales clerk, office clerk, messenger.	0	1	0	0	0	0	0	1	0	0
12. Salesman - such as real estate or insurance salesman, factory representative, etc.	3	1	0	0	3	1	0	0	0	0
13. Manager - such as sales manager, store manager, office manager, business manager, factory supervisor.	2	3	0	1	0	1	0	1	2	0
14. Official - such as manufacturer, officer in a large company, banker, government official or inspector.	1	1	0	0	1	0	0	0	0	1
15. Proprietor or owner - such as owner of a small business, wholesaler, retailer, contractor, restaurant owner.	1	4	0	0	0	0	1	1	0	3
16. Professional - such as actor, accountant, artist, clergyman, dentist, engineer, lawyer, librarian, scientist, teacher, military officer.	39	48	14	11	7	14	11	12	7	11
17. Technical - such as draftsman, surveyor, medical or dental technician, etc.	16	8	7	4	3	2	4	2	2	0
- No response	66	76	17	17	17	21	17	20	15	18

6. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	5	3	2	2	4	3	3	2	7	5	0	0
2.	0	1	0	0	0	0	0	1	0	1	0	0
3.	0	0	0	0	0	0	0	0	0	0	0	0
4.	0	0	0	0	0	0	0	0	0	0	0	0
5.	0	0	0	0	0	0	0	0	0	0	0	0
6.	0	0	0	0	0	0	0	0	0	0	0	0
7.	0	1	1	0	1	0	0	1	1	1	0	0
8.	0	0	0	1	0	0	0	1	0	0	0	1
9.	1	0	1	0	0	0	2	0	2	0	0	0
10.	1	0	0	1	1	0	0	1	1	1	0	0
11.	0	0	0	1	0	1	0	0	0	0	0	1
12.	2	1	1	0	1	0	2	1	3	1	0	0
13.	0	2	2	1	1	1	1	2	2	3	0	0
14.	0	1	1	0	0	1	1	0	1	1	0	0
15.	1	3	0	1	0	2	1	2	1	3	0	1
16.	26	35	13	13	30	38	9	10	36	46	3	2
17.	11	3	5	5	9	6	7	2	16	8	0	0
-	46	44	20	32	47	51	19	25	0	2	66	74

7. Considering the opportunities you are likely to have and the education you are likely to get, which one of the following statements best describes the type of occupation which you really <u>expect</u> to be doing for most of your life?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. <u>I can't say at this time</u>.	8	7	0	4	3	1	2	2	3	0
2. <u>Farm owner and/or manager</u>.	1	1	0	1	0	0	0	0	1	0
3. <u>Farm foreman</u>.	0	0	0	0	0	0	0	0	0	0
4. <u>Farm worker</u>.	0	0	0	0	0	0	0	0	0	0
5. <u>Workman or laborer</u> - such as factory or construction worker, fisherman, filling station attendant, janitor.	0	1	0	0	0	0	0	0	0	1
6. <u>Private household worker</u> - such as servant, butler, etc.	0	0	0	0	0	0	0	0	0	0
7. <u>Protective worker</u> - such as policeman, detective, sheriff, fireman.	1	1	1	0	0	0	0	1	0	0
8. <u>Service worker</u> - such as barber beautician, waiter, mail carrier.	1	0	0	0	0	0	1	0	0	0
9. <u>Semi-skilled worker</u> - such as factory machine operator, truck driver, meatcutter.	1	5	0	2	0	0	0	0	1	3
10. <u>Skilled worker or foreman</u> - such as a baker, carpenter, electrician, mechanic, plumber, plasterer, tailor, foreman in a factory or mine (but not on a farm).	4	4	1	0	1	1	1	1	1	2
11. <u>Clerical worker</u> - such as bank teller, bookkeeper, sales clerk, office clerk, messenger.	1	1	0	0	1	0	0	1	0	0

7. (cont.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
12. Salesman - such as real estate or insurance salesman, factory representative, etc.	3	0	1	0	2	0	0	0	0	0
13. Manager - such as sales manager, store manager, office manager, business manager, factory supervisor.	2	3	0	0	0	2	1	1	1	0
14. Official - such as manufacturer, officer in a large company, banker, government official or inspector.	0	4	0	2	0	1	0	0	0	1
15. Proprietor or owner - such as owner of a small business, wholesaler, retailer, contractor, restaurant owner.	1	4	1	0	0	1	0	1	0	2
16. Professional - such as actor, accountant, artist, clergyman, dentist, engineer, lawyer, librarian, scientist, teacher, military officer.	37	35	12	6	8	12	11	9	6	8
17. Technical - such as draftsman, surveyor, medical or dental technician, etc.	11	8	5	3	2	2	4	3	0	0
- No response	68	77	18	18	18	21	17	20	15	18

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	6	6	2	1	4	5	4	2	8	7	0	0
2.	1	1	0	0	0	0	1	1	1	1	0	0
3.	0	0	0	0	0	0	0	0	0	0	0	0
4.	0	0	0	0	0	0	0	0	0	0	0	0
5.	0	0	0	1	0	1	0	0	0	1	0	0
6.	0	0	0	0	0	0	0	0	0	0	0	0
7.	0	1	1	0	1	0	0	1	1	1	0	0
8.	0	0	1	0	0	0	1	0	1	0	0	0
9.	0	1	1	4	0	2	1	3	1	5	0	0
10.	3	2	1	2	4	2	0	2	4	4	0	0
11.	0	0	1	1	0	1	1	0	1	0	0	1
12.	2	0	1	0	2	0	1	0	3	0	0	0
13.	1	2	1	1	0	2	2	1	2	2	0	1
14.	0	3	0	1	0	3	0	1	0	4	0	0
15.	1	2	0	2	0	2	1	2	1	2	0	2
16.	24	27	13	8	29	27	8	8	34	34	3	1
17.	7	4	4	4	7	6	4	2	11	8	0	0
-	48	45	20	32	47	52	21	25	2	3	66	74

8. Which of the following statements best describes the type of occupation which you would most like to follow most of your life? (If you are a boy, skip questions 8 and 9 and go to question 11.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I can't say at this time.	6	4	1	2	1	0	2	2	2	0
2. Housewife, at least the majority of the time.	4	11	2	2	1	4	1	3	0	2
3. Farm owner and/or manager.	1	1	0	0	1	0	0	0	0	1
4. Worker or laborer - such as lady janitor, babysitter, laundry worker.	0	0	0	0	0	0	0	0	0	0
5. Private household worker - such as housekeeper, maid, laundress, etc.	0	0	0	0	0	0	0	0	0	0
6. Protective worker - such as policewoman, private detective.	0	1	0	0	0	1	0	0	0	0
7. Service worker - such as airline hostess, beautician, waitress.	2	4	0	0	0	1	2	2	0	1
8. Semi-skilled worker - such as factory machine operator, assembly inspector.	1	0	0	0	0	0	1	0	0	0
9. Skilled worker or forewoman - such as baker, chef, seamstress, practical nurse.	2	1	1	0	0	1	1	0	0	0
10. Clerical worker - such as book-keeper, secretary, typist, sales clerk, store clerk.	5	12	1	1	5	2	1	5	0	4
11. Sales - such as real estate, life insurance.	0	0	0	0	0	0	0	0	0	0
12. Manager - such as sales manager, store manager, officer manager, business manager, factory super-visor.	1	0	1	0	0	0	0	0	0	0
13. Official - such as manufacturer, officer in a large company, banker, government official or inspector.	0	0	0	0	0	0	0	0	0	0
14. Proprietor or owner - such as owner of a small business, whole-saler, retailer, restaurant owner.	0	1	0	0	0	0	0	1	0	0
15. Professional - such as actress, accountant, artist, dentist, registered nurse, physician, engineer, lawyer, librarian, scientist, teacher, military officer.	45	38	11	8	11	14	10	5	13	11
16. Technical - such as draftsman, medical or dental technician.	2	4	1	1	0	1	1	2	0	0
17. Military service, non-officer.	0	0	0	0	0	0	0	0	0	0
- No response	70	73	22	21	17	17	18	19	13	16

8. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	5	3	1	1	4	1	2	3	0	0	6	4
2.	2	7	2	4	3	7	1	4	0	0	4	11
3.	1	0	0	1	1	1	0	0	0	1	1	0
4.	0	0	0	0	0	0	0	0	0	0	0	0
5.	0	0	0	0	0	0	0	0	0	0	0	0
6.	0	1	0	0	0	0	0	1	0	0	0	1
7.	2	0	0	4	1	1	1	3	0	0	2	4
8.	0	0	1	0	0	0	1	0	1	0	0	0
9.	0	0	2	1	1	0	1	1	0	0	2	1
10.	2	6	3	6	2	3	4	9	1	0	5	12
11.	0	0	0	0	0	0	0	0	0	0	0	0
12.	1	0	0	0	1	0	0	0	0	0	1	0
13.	0	0	0	0	0	0	0	0	0	0	0	0
14.	0	1	0	0	0	1	0	0	0	1	0	0
15.	32	23	13	15	35	34	10	4	0	0	45	38
16.	1	2	1	2	1	4	1	0	0	1	2	3
17.	0	0	0	0	0	0	0	0	0	0	0	0
-	47	51	23	22	46	51	24	22	69	69	1	4

9. Considering the opportunities you are likely to have and the education you are likely to get, which one of the statements below best describes the type of occupation which you really expect to be doing for most of your life?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I can't say at this time.	6	4	2	0	2	0	1	2	1	2
2. Housewife, at least the majority of the time.	13	11	3	1	3	3	6	6	1	1
3. Farm owner and/or manager.	0	0	0	0	0	0	0	0	0	0
4. Worker or laborer - such as lady janitor, babysitter, laundry worker.	0	0	0	0	0	0	0	0	0	0
5. Private household worker - such as housekeeper, maid, laundress, etc.	0	0	0	0	0	0	0	0	0	0
6. Protective worker - such as policewoman, private detective.	0	1	0	1	0	0	0	0	0	0
7. Service worker - such as airline hostess, beautician, waitress.	1	4	0	2	0	2	1	0	0	0
8. Semi-skilled worker - such as factory machine operator, assembly inspector.	0	0	0	0	0	0	0	0	0	0
9. Skilled worker or forewoman - such as baker, chef, seamstress, practical nurse.	3	2	1	0	1	1	1	1	0	0
10. Clerical worker - such as bookkeeper, secretary, typist, sales clerk, store clerk.	5	14	0	3	3	3	1	4	1	4
11. Sales - such as real estate, life insurance.	0	3	0	0	0	1	0	1	0	1

9. (cont.)

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
12. Manager - such as sales manager, store manager, officer manager, business manager, factory supervisor.	1	0	1	0	0	0	0	0	0	0
13. Official - such as manufacturer, officer in a large company, banker, government official or inspector.	0	0	1	0	1	0	0	0	0	0
14. Proprietor or owner - such as owner of a small business, wholesaler, retailer, restaurant owner.	0	1	0	0	0	0	0	1	0	0
15. Professional - such as actress, accountant, artist, dentist, registered nurse, physician, engineer, lawyer, librarian, scientist, teacher, military officer.	37	34	9	8	9	11	7	4	12	11
16. Technical - such as draftsman, medical or dental technician.	2	3	1	0	0	2	1	1	0	0
17. Military service, non-officer.	0	0	0	0	0	0	0	0	0	0
- No response	71	73	22	20	17	18	19	19	13	16

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	5	2	1	2	5	3	1	1	0	1	6	3
2.	11	9	2	2	9	7	4	4	0	0	13	11
3.	0	0	0	0	0	0	0	0	0	0	0	0
4.	0	0	0	0	0	0	0	0	0	0	0	0
5.	0	0	0	0	0	0	0	0	0	0	0	0
6.	0	0	0	1	0	1	0	0	0	0	0	1
7.	1	2	0	2	1	2	0	2	0	0	1	4
8.	0	0	0	0	0	0	0	0	0	0	0	0
9.	0	0	3	2	1	1	2	1	0	0	3	2
10.	1	6	4	8	1	6	4	8	0	0	5	14
11.	0	2	0	1	0	0	0	3	0	0	0	3
12.	1	0	0	0	1	0	0	0	0	0	1	0
13.	0	0	0	0	1	0	0	0	1	0	0	0
14.	0	1	0	0	0	1	0	0	0	1	0	0
15.	26	21	11	13	29	30	8	4	0	0	37	34
16.	1	1	1	2	1	2	1	1	0	1	2	2
17.	0	0	0	0	0	0	0	0	0	0	0	0
-	47	50	24	23	46	50	25	23	70	69	1	4

10. After you finish your schooling, what do you expect to do in the future? (Boys, skip this item.)

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Have a lifetime career other than homemaker.	3	2	1	0	1	0	1	1	0	1
2. Be a homemaker (housewife).	2	5	1	0	1	0	0	2	0	3
3. Both a lifetime career and a homemaker.	15	18	5	7	3	8	5	1	2	2

10. (cont.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
4. Have a career for awhile, then full-time homemaker.	19	20	4	4	3	4	8	6	4	6
5. Have a full-time career for awhile, then combine homemaker and career.	28	32	6	5	9	10	4	10	9	7
- No response	72	74	22	20	18	19	19	19	13	16

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	1	1	1	1	1	2	1	0	0	3	2
2.	2	4	0	1	0	3	2	2	0	1	2	4
3.	6	8	9	10	11	9	4	9	0	0	15	18
4.	18	14	1	6	12	16	7	4	0	0	19	20
5.	17	17	11	15	23	23	5	9	0	1	28	31
-	48	50	24	24	47	51	25	23	70	70	2	4

Below are five possible statements which are to be used with items 11 through 26. Use these statements to indicate <u>whether or not you would go</u> to the following sources of information <u>for help</u> in making your job or college plans.

11. Father or male guardian

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	10	16	4	6	2	5	2	3	2	2
2. Probably not.	8	10	0	1	4	5	3	2	1	2
3. Might or might not - not sure.	28	11	8	0	8	3	9	5	3	3
4. Probably would.	32	36	6	7	7	8	10	12	9	9
5. Definitely would.	59	74	20	21	14	18	13	16	12	19
- No response	2	4	1	1	0	2	0	1	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	8	7	2	9	7	7	3	9	2	6	8	10
2.	3	2	5	8	4	7	4	3	1	5	7	5
3.	20	7	8	4	15	5	13	6	15	5	13	6
4.	18	18	14	18	21	21	11	15	23	19	9	17
5.	43	58	16	16	45	60	14	14	28	36	31	38
-	1	2	1	2	2	3	0	1	1	1	1	3

12. Mother or female guardian

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	5	3	1	0	1	2	1	1	2	0
2. Probably not.	12	8	6	1	4	1	2	2	0	4
3. Might or might not - not sure.	12	20	2	7	4	5	4	2	2	6
4. Probably would.	42	46	9	8	11	12	15	16	7	10
5. Definitely would.	68	72	21	20	15	20	15	17	17	15
- No response	0	2	0	0	0	1	0	1	0	0

12. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	3	1	2	2	2	3	3	0	4	2	1	1
2.	9	4	3	4	6	5	6	3	7	5	5	3
3.	10	12	2	8	7	11	5	9	9	12	3	8
4.	28	24	14	22	31	32	11	14	25	27	17	19
5.	43	51	25	21	48	51	20	21	25	25	43	47
-	0	2	0	0	0	1	0	1	0	1	0	1

13. Brothers, sisters or other relatives

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	24	17	9	4	3	8	7	2	5	3
2. Probably not.	11	29	3	7	3	10	3	6	2	6
3. Might or might not - not sure.	26	27	7	8	7	7	9	3	3	9
4. Probably would.	52	42	13	9	14	7	12	17	13	9
5. Definitely would.	26	34	7	8	8	8	6	10	5	8
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	18	9	6	8	15	12	9	5	16	9	8	8
2.	8	15	3	14	11	20	0	9	3	16	8	13
3.	19	19	7	8	17	18	9	9	13	17	13	10
4.	33	24	19	18	34	29	18	13	26	20	26	22
5.	15	25	11	9	17	23	9	11	12	9	14	25
-	0	2	0	0	0	1	0	1	0	1	0	1

14. Friends

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	18	17	4	5	6	4	3	5	5	3
2. Probably not.	23	26	4	8	6	7	8	5	5	6
3. Might or might not - not sure.	51	52	14	13	14	11	12	16	11	12
4. Probably would.	32	36	9	7	7	13	9	6	7	10
5. Definitely would.	15	18	8	3	2	5	5	6	0	4
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	9	8	9	9	11	6	7	11	12	7	6	10
2.	14	14	9	12	18	21	5	5	11	11	12	15
3.	40	29	11	23	35	35	16	17	24	32	27	20
4.	21	27	11	9	19	25	13	11	17	17	15	19
5.	9	14	6	4	11	15	4	3	6	4	9	14
-	0	2	0	0	0	1	0	1	0	1	0	1

15. Coaches of teams you have been on

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	60	57	10	10	16	15	20	17	14	15
2. Probably not.	29	33	11	11	7	10	7	6	4	6
3. Might or might not - not sure	28	35	10	8	7	10	3	10	8	7
4. Probably would.	8	13	1	5	1	2	4	3	2	3
5. Definitely would.	8	8	5	2	1	2	2	1	0	3
- No response	6	5	2	0	3	2	1	2	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	43	36	17	21	42	38	18	19	23	21	37	36
2.	18	23	11	10	18	26	11	7	13	14	16	19
3.	18	23	10	12	19	20	9	15	18	26	10	9
4.	3	5	5	8	5	10	3	3	6	6	2	7
5.	5	2	3	6	5	5	3	3	8	3	0	5
-	6	5	0	0	5	4	1	1	2	2	4	3

16. Minister, priest, or rabbi

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	53	47	11	10	17	16	11	12	14	9
2. Probably not.	38	36	8	10	10	5	14	8	6	13
3. Might or might not - not sure.	25	32	11	10	3	11	8	6	3	5
4. Probably would.	15	25	5	5	4	6	2	7	4	7
5. Definitely would.	7	9	4	1	0	2	2	5	1	1
- No response	1	2	0	0	1	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	35	36	18	11	37	36	16	11	24	22	29	25
2.	27	24	11	12	24	25	14	11	21	17	17	19
3.	15	21	10	11	16	18	9	14	10	19	15	13
4.	10	7	5	18	12	17	3	8	9	11	6	14
5.	5	4	2	5	4	6	3	3	5	2	2	7
-	1	2	0	0	1	1	0	1	1	1	0	1

17. Teachers

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	12	11	5	4	2	5	1	2	4	0
2. Probably not.	11	20	1	3	4	6	4	6	2	5
3. Might or might not - not sure.	44	39	12	8	8	9	16	9	8	13
4. Probably would.	43	49	13	15	12	13	6	8	12	13
5. Definitely not.	29	30	8	6	9	7	10	13	2	4
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	6	4	6	7	6	7	6	4	6	4	6	7
2.	8	11	3	9	8	13	3	7	5	10	6	10
3.	32	28	12	11	34	27	10	12	19	21	25	18
4.	28	30	15	19	28	32	15	17	25	22	18	27
5.	19	19	10	11	18	23	11	7	15	14	14	16
-	0	2	0	0	0	1	0	1	0	1	0	1

18. School counselors

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	6	9	2	3	0	6	1	0	3	0
2. Probably not.	5	8	0	2	1	2	1	2	3	2
3. Might or might not - not sure.	19	27	8	9	3	9	7	6	1	3
4. Probably would.	45	44	16	14	11	10	10	8	8	12
5. Definitely would.	64	61	13	8	20	13	18	22	13	18
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	4	4	2	5	2	6	4	3	1	5	5	4
2.	3	5	2	3	4	5	1	3	1	4	4	4
3.	17	16	2	11	15	16	4	11	13	13	6	14
4.	29	22	16	22	31	33	14	11	23	20	22	24
5.	40	45	24	16	42	42	22	19	32	29	32	32
-	0	2	0	0	0	1	0	1	0	1	0	1

19. Private guidance counselors - not part of your school

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	44	42	10	10	10	11	15	12	9	9
2. Probably not.	29	38	8	11	8	8	9	10	4	9
3. Might or might not - not sure.	31	33	8	9	7	9	9	4	7	11
4. Probably would.	16	19	5	5	4	8	2	4	5	2
5. Definitely would.	15	16	5	1	5	4	2	8	3	3
- No response	4	3	3	0	1	1	0	1	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	34	31	10	11	26	29	18	13	22	21	22	21
2.	21	30	8	8	24	29	5	9	13	16	16	22
3.	17	15	14	18	23	21	8	12	16	16	15	17
4.	10	10	6	9	10	13	6	6	10	11	6	8
5.	7	5	8	11	8	9	7	7	9	7	6	9
-	4	3	C	0	3	2	1	1	0	1	4	2

20. Books about the information you seek

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	12	6	4	3	4	0	3	3	1	0
2. Probably not.	11	11	0	3	3	0	3	3	5	5
3. Might or might not - not sure.	34	33	8	7	9	10	12	8	5	8
4. Probably would.	48	54	17	12	9	14	10	12	12	16
5. Definitely would.	34	45	10	11	10	16	9	12	5	6
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	7	1	5	5	7	3	5	3	6	2	6	4
2.	7	7	4	4	8	5	3	6	6	8	5	3
3.	25	17	9	16	23	19	11	14	20	15	14	18
4.	32	34	16	20	32	38	16	16	24	24	24	30
5.	22	33	12	12	24	37	10	8	14	22	20	23
-	0	2	0	0	0	1	0	1	0	1	0	1

21. Audio or visual devices designed to help you make a choice

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	16	18	4	4	5	8	3	4	4	2
2. Probably not.	18	28	2	4	4	7	10	9	2	8
3. Might or might not - not sure.	40	45	11	13	8	11	12	10	9	11
4. Probably would.	36	38	13	11	10	8	8	8	5	11
5. Definitely would.	29	20	9	4	8	6	4	7	8	3
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	8	8	8	10	8	11	8	7	8	4	8	14
2.	11	16	7	12	15	16	3	12	7	11	11	17
3.	33	29	7	16	28	30	12	15	22	24	18	21
4.	26	22	10	16	23	27	13	11	19	24	17	14
5.	15	17	14	3	20	18	9	2	14	8	15	12
-	0	2	0	0	0	1	0	1	0	1	0	1

22. College catalogues

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	8	7	2	0	3	4	1	2	2	1
2. Probably not.	8	11	1	3	2	0	3	6	2	2
3. Might or might not - not sure.	20	13	11	5	3	3	4	2	2	3
4. Probably would.	28	43	11	10	7	14	6	7	4	12
5. Definitely would.	75	75	14	18	20	19	23	21	18	17
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	4	3	4	4	1	2	7	5	7	1	1	6
2.	4	5	4	6	5	4	3	7	6	5	2	6
3.	14	6	6	7	11	8	9	5	12	10	8	3
4.	19	22	9	21	20	25	8	18	14	22	14	21
5.	52	56	23	19	57	63	18	12	31	33	44	42
-	0	2	0	0	0	1	0	1	0	1	0	1

23. Persons in the occupation or at the college you are considering

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	5	4	1	2	3	1	0	1	1	0
2. Probably not.	5	6	3	0	1	4	1	1	0	1
3. Might or might not - not sure.	30	21	13	8	4	4	9	5	4	4
4. Probably would.	44	52	11	15	11	10	14	12	8	15
5. Definitely would.	55	66	11	11	16	21	13	19	15	15
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	2	3	2	1	1	4	3	4	2	1	2
2.	3	4	2	2	4	3	1	3	3	3	2	3
3.	19	10	11	11	22	15	8	6	17	13	13	8
4.	33	37	11	15	33	34	11	18	20	24	24	28
5.	36	39	19	27	34	49	21	17	26	29	29	37
-	0	2	0	0	0	1	0	1	0	1	0	1

24. TV shows or movies

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	52	51	12	10	18	15	13	19	9	7
2. Probably not.	32	49	8	14	5	10	11	11	8	14
3. Might or might not - not sure.	35	32	12	12	7	9	9	3	7	8
4. Probably would.	16	13	6	0	4	4	3	5	3	4
5. Definitely would.	4	4	1	0	1	2	1	0	1	2
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	32	30	20	21	33	33	19	18	28	20	24	31
2.	24	34	8	15	23	32	9	17	15	24	17	25
3.	29	16	6	16	28	24	7	8	16	17	19	15
4.	8	11	8	2	8	11	8	2	7	9	9	4
5.	0	1	4	3	2	2	2	2	4	1	0	3
-	0	2	0	0	0	1	0	1	0	1	0	1

25. Popular magazines

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	49	42	10	9	18	11	12	14	9	8
2. Probably not.	34	50	9	13	5	12	12	12	8	13
3. Might or might not - not sure.	37	33	14	8	7	10	9	8	7	7
4. Probably would.	15	19	5	4	3	4	3	4	4	7
5. Definitely would.	4	4	1	1	2	3	1	0	0	0
- No response	0	3	0	1	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	31	28	18	14	31	30	18	12	28	16	21	26
2.	26	32	8	18	25	34	9	16	16	24	18	26
3.	26	17	11	16	27	22	10	11	17	19	20	14
4.	8	12	7	7	9	13	6	6	8	10	7	9
5.	2	2	2	2	2	2	2	2	1	2	3	2
-	0	3	0	0	0	2	0	1	0	1	0	2

26. A system like the Education and Career Exploration System

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Definitely not.	5	6	1	3	2	2	1	1	1	0
2. Probably not.	6	13	3	3	2	1	1	3	0	6
3. Might or might not - not sure.	25	41	5	9	3	10	10	12	7	10
4. Probably would.	39	51	10	13	10	17	11	8	8	13
5. Definitely would.	64	38	20	8	18	10	14	14	12	6
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	4	3	2	3	5	2	1	5	3	0	3
2.	4	10	2	3	3	11	3	2	3	6	3	7
3.	15	23	10	18	20	27	5	14	11	19	14	22
4.	28	35	11	16	28	31	11	20	22	26	17	25
5.	44	20	20	18	40	28	24	10	29	17	35	21
-	0	2	0	0	0	1	0	1	0	1	0	1

Below are five possible statements which are to be used with items 27 through 41. Use these statements to indicate the extent to which each of the following sources of information have <u>given you useful information</u> which has been helpful to you in making your job or college plans.

27. Father or male guardian

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. <u>has not</u> given me much useful information.	25	27	8	7	7	10	6	6	4	4
2. <u>has given</u> me <u>very little</u> useful information.	17	8	2	0	8	2	5	3	2	3
3. <u>has given</u> me <u>some</u> useful information.	43	46	10	12	11	10	12	17	10	7
4. <u>has given</u> me a <u>good deal</u> of useful information.	34	32	12	5	8	8	8	8	6	11
5. <u>has given</u> me a <u>great deal</u> of useful information.	18	35	6	11	1	10	5	5	6	9
- No response	2	3	1	1	0	1	1	0	0	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	16	9	9	18	13	12	12	15	9	9	16	18
2.	7	5	10	3	10	3	7	5	8	3	9	5
3.	35	33	8	13	31	33	12	13	21	26	22	20
4.	21	21	13	11	24	24	10	8	20	20	14	12
5.	13	26	5	9	14	29	4	6	12	14	6	21
-	1	0	1	3	2	2	0	1	0	0	2	3

28. Mother or female guardian

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	16	9	5	1	8	3	2	3	1	2
2. has given me very little useful information.	17	18	2	5	7	3	4	5	4	5
3. has given me some useful information.	40	53	15	13	10	13	10	18	5	9
4. has given me a good deal of useful information.	40	39	12	8	10	17	12	5	6	9
5. has given me a great deal of useful information.	25	32	5	9	0	5	8	8	12	10
- No response	1	0	0	0	0	0	1	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	12	6	4	3	5	8	11	1	10	7	6	2
2.	10	9	7	9	11	8	6	10	11	9	6	9
3.	30	35	10	18	30	33	10	20	19	28	21	25
4.	23	23	17	16	28	32	12	7	17	19	23	20
5.	18	21	7	11	19	22	6	10	13	9	12	23
-	0	0	1	0	1	0	0	0	0	0	1	0

29. Brothers, sisters, or other relatives

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	46	43	18	10	9	17	14	10	5	6
2. has given me very little useful information.	21	27	4	9	8	4	5	6	4	8
3. has given me some useful information.	35	43	10	9	12	10	5	14	8	10
4. has given me a good deal of useful information.	23	25	6	6	3	5	7	7	7	7
5. has given me a great deal of useful information.	13	13	1	2	3	5	5	2	4	4
- No response	1	0	0	0	0	0	1	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	31	26	15	17	27	33	19	10	26	24	20	19
2.	15	19	6	8	16	20	5	7	9	15	12	12
3.	22	27	13	16	22	23	13	20	17	17	18	26
4.	17	15	6	10	16	17	7	8	10	14	13	11
5.	8	7	5	6	12	10	1	3	8	2	5	11
-	0	0	1	0	1	0	0	0	0	0	1	0

30. Friends

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	50	36	16	12	16	13	11	6	7	5
2. has given me very little useful information.	29	34	8	10	7	9	8	8	6	7
3. has given me some useful information.	35	50	11	8	5	12	9	20	10	10
4. has given me a good deal of useful information.	15	23	2	4	4	4	5	4	4	11
5. has given me a great deal of useful information.	8	8	2	2	2	3	3	1	1	2
- No response	2	0	0	0	1	0	1	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	32	23	18	13	32	23	18	13	27	18	23	18
2.	22	20	7	14	22	21	7	13	12	19	17	15
3.	25	30	10	20	25	34	10	16	21	23	14	27
4.	8	16	7	7	8	19	7	4	6	9	9	14
5.	5	5	3	3	5	6	3	2	4	3	4	5
-	1	0	1	0	2	0	0	0	0	0	2	0

31. Coaches

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	101	104	29	22	28	33	27	28	17	21
2. has given me very little useful information.	14	20	4	5	2	3	2	3	6	9
3. has given me some useful information.	11	12	3	3	2	3	3	6	3	0
4. has given me a good deal of useful information.	2	6	1	3	0	0	1	1	0	2
5. has given me a great deal of useful information.	2	5	0	1	0	1	1	1	1	2
- No response	9	4	2	2	3	1	3	0	1	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	68	71	33	33	70	74	31	30	50	44	51	60
2.	8	9	6	11	8	10	6	10	4	14	10	6
3.	7	8	4	4	6	7	5	5	9	7	2	5
4.	0	3	2	3	2	4	0	2	2	3	0	3
5.	2	0	0	5	1	4	1	1	2	3	0	2
-	8	3	1	1	7	4	2	0	3	1	6	3

32. Minister, priest, or rabbi

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	102	95	28	21	26	27	29	26	19	21
2. has given me very little useful information.	10	16	3	3	3	3	3	3	1	7
3. has given me some useful information.	13	22	3	6	2	7	3	3	5	6
4. has given me a good deal of useful information.	7	8	5	2	0	1	0	4	2	1
5. has given me a great deal of useful information.	2	9	0	3	1	3	0	3	1	0
- No response	5	1	0	1	3	0	2	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	68	69	34	26	70	68	32	27	50	45	52	50
2.	6	7	4	9	7	9	3	7	5	7	5	9
3.	8	10	5	12	10	13	3	9	9	10	4	12
4.	5	5	2	3	3	6	4	2	3	7	4	1
5.	2	3	0	6	0	6	2	3	1	3	1	6
-	4	0	1	1	4	1	1	0	2	0	3	1

33. Teachers

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	50	33	18	8	12	7	11	10	9	8
2. has given me very little useful information.	16	33	5	9	3	8	4	9	4	7
3. has given me some useful information.	37	47	7	9	11	17	12	11	7	10
4. has given me a good deal of useful information.	29	28	6	9	6	6	9	4	8	9
5. has given me a great deal of useful information.	6	10	3	1	3	3	0	5	0	1
- No response	1	0	0	0	0	0	1	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	32	20	18	13	34	22	16	11	23	12	27	21
2.	12	22	4	11	13	24	3	9	8	18	8	15
3.	28	31	9	16	27	29	10	18	22	23	15	24
4.	16	16	13	12	17	22	12	6	14	17	15	11
5.	5	5	1	5	2	6	4	4	3	2	3	8
-	0	0	1	0	1	0	0	0	0	0	1	0

34. School counselors

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	29	21	11	10	9	10	4	1	5	0
2. has given me very little useful information.	11	26	3	7	4	9	2	7	2	3
3. has given me some useful information.	29	47	14	6	4	13	9	15	2	13
4. has given me a good deal of useful information.	41	33	8	9	14	4	11	8	8	12
5. has given me a great deal of useful information.	28	23	3	3	4	5	10	8	11	7
- No response	1	1	0	1	0	0	1	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	16	11	13	10	18	16	11	5	15	11	14	10
2.	10	21	1	5	9	19	2	7	3	9	8	17
3.	21	27	8	20	21	31	8	16	13	22	16	25
4.	29	21	12	12	28	22	13	11	25	18	16	15
5.	17	13	11	10	17	14	11	9	14	12	14	11
-	0	1	1	0	1	1	0	0	0	0	1	1

35. Private guidance counselors - not part of your school

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	100	111	30	28	25	31	24	28	21	24
2. has given me very little useful information.	12	12	3	3	3	4	5	1	1	4
3. has given me some useful information.	12	5	4	1	1	1	4	2	3	1
4. has given me a good deal of useful information.	4	8	0	1	1	0	2	4	1	3
5. has given me a great deal of useful information.	3	8	0	1	2	4	0	3	1	0
- No response	8	7	2	2	3	1	2	1	1	3

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	69	76	31	35	69	79	31	32	50	51	50	60
2.	9	5	3	7	9	5	3	7	9	4	3	8
3.	5	3	7	2	7	3	5	2	8	4	4	1
4.	3	3	1	5	3	6	1	2	2	6	2	2
5.	1	2	2	6	0	4	3	4	0	4	3	4
-	6	5	2	2	6	6	2	1	1	3	7	4

36. Books about the information you seek

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	42	31	14	11	11	5	9	9	8	6
2. has given me very little useful information.	25	23	5	9	7	5	9	6	4	3
3. has given me some useful information.	26	51	10	6	1	17	7	14	8	14
4. has given me a good deal of useful information.	27	29	7	5	7	11	7	5	6	8
5. has given me a great deal of useful information.	16	15	3	4	7	3	4	5	2	3
- No response	3	2	0	1	2	0	1	0	0	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	29	17	13	14	26	19	16	12	23	16	19	15
2.	18	15	7	8	18	12	7	11	12	12	13	11
3.	16	33	10	18	21	37	5	14	17	24	9	27
4.	17	16	10	13	17	20	10	9	11	12	16	17
5.	11	11	5	4	9	13	7	2	6	7	10	8
-	2	2	1	0	3	2	0	0	1	1	2	1

37. Audio or visual devices designed to help you make a choice

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	58	81	16	18	16	24	17	26	9	13
2. has given me very little useful information.	16	24	3	5	7	8	2	4	4	7
3. has given me some useful information.	25	25	5	6	5	3	6	5	9	11
4. has given me a good deal of useful information.	18	10	6	2	3	4	6	2	3	2
5. has given me a great deal of useful information.	20	6	8	1	4	2	5	1	3	2
- No response	2	5	1	4	0	0	1	1	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	38	52	20	29	36	55	20	26	30	41	28	40
2.	11	15	5	9	11	12	5	12	7	8	9	16
3.	15	15	10	10	20	19	5	6	13	13	12	12
4.	11	6	7	4	13	8	5	2	10	5	8	5
5.	17	2	3	4	11	5	9	1	10	2	10	4
-	1	4	1	1	1	4	1	1	0	3	2	2

38. College catalogues

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	56	31	22	9	20	8	9	8	5	6
2. has given me very little useful information.	8	20	3	6	2	6	2	8	1	0
3. has given me some useful information.	21	44	8	9	1	16	8	11	4	8
4. has given me a good deal of useful information.	29	29	3	8	8	4	9	4	9	13
5. has given me a great deal of useful information.	23	27	2	4	4	7	8	8	9	8
- No response	2	0	1	0	0	0	1	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	36	15	20	16	30	15	26	16	32	13	24	18
2.	8	13	0	7	6	12	2	8	4	10	4	10
3.	11	26	10	18	16	32	5	12	10	22	11	22
4.	19	20	10	9	22	20	7	9	12	16	17	13
5.	18	20	5	7	19	24	4	3	12	11	11	16
-	1	0	1	0	1	0	1	0	0	0	2	0

39. Persons in the occupation or at the college you are considering

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	59	34	24	11	16	14	13	8	6	1
2. has given me very little useful information.	11	22	3	11	1	2	4	5	3	4
3. has given me some useful information.	20	35	6	6	4	10	9	8	1	11
4. has given me a good deal of useful information.	24	30	4	5	6	8	3	6	11	11
5. has given me a great deal of useful information.	20	29	1	2	6	7	6	12	7	8
- No response	5	1	1	1	2	0	2	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	40	24	19	10	35	22	24	12	28	18	31	16
2.	8	13	3	9	8	14	3	8	7	11	4	11
3.	14	24	6	11	18	21	2	14	12	20	8	15
4.	13	13	11	17	15	20	9	10	12	9	12	21
5.	14	19	6	10	14	25	6	4	9	13	11	16
-	4	1	1	0	4	1	1	0	2	1	3	0

40. TV shows or movies

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	101	108	26	24	27	26	27	30	21	28
2. has given me very little useful information.	18	25	7	8	1	9	5	5	5	3
3. has given me some useful information.	10	12	3	3	3	4	2	3	2	2
4. has given me a good deal of useful information.	5	3	2	0	2	1	1	1	0	1
5. has given me a great deal of useful information.	2	2	1	0	0	1	1	0	0	1
- No response	3	1	0	1	2	0	1	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	70	73	31	35	67	76	34	32	49	51	52	57
2.	11	11	7	14	14	12	4	13	14	13	4	12
3.	8	8	2	4	8	9	2	3	4	5	6	7
4.	2	2	3	1	2	3	3	0	2	3	3	0
5.	1	0	1	2	0	2	2	0	1	0	1	2
-	1	0	2	1	3	1	0	0	0	0	3	1

41. Popular magazines

This source:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. has not given me much useful information.	89	84	27	19	24	20	23	22	15	23
2. has given me very little useful information.	23	31	7	5	3	11	5	8	8	7
3. has given me some useful information.	14	21	2	5	4	6	5	6	3	4
4. has given me a good deal of useful information.	5	8	2	3	1	3	1	1	1	1
5. has given me a great deal of useful information.	5	6	1	3	1	1	2	2	1	0
- No response	3	1	0	1	2	0	1	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	61	55	28	29	61	57	28	27	44	38	45	46
2.	16	19	7	12	16	20	7	11	15	15	8	16
3.	9	11	5	10	12	14	2	7	7	12	7	9
4.	3	5	2	3	2	6	3	2	2	5	3	3
5.	3	4	2	2	0	6	5	0	2	1	3	5
-	1	0	2	1	3	0	0	1	0	1	3	0

42. What do you see yourself doing after you leave high school?

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Working at my intended job.	10	17	3	2	4	5	2	6	1	4
2. Doing my military service.	5	11	2	2	1	2	1	2	1	5
3. Going to a specialized vocational training school.	14	22	2	6	4	5	5	6	3	5
4. Going to a junior college or community college.	18	11	6	3	2	2	7	3	3	3
5. Going to a four-year college or university.	87	87	25	22	23	27	20	20	19	18
- No response	5	3	1	1	1	0	2	2	1	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	6	9	4	8	1	5	9	12	4	5	6	12
2.	3	3	2	8	3	6	2	5	5	10	0	1
3.	11	9	3	13	4	9	10	13	8	7	6	15
4.	10	6	8	5	11	4	7	7	10	4	8	7
5.	59	64	28	23	74	77	13	10	42	43	45	44
-	4	3	1	0	1	2	4	1	1	3	4	0

43. Do you feel that you have enough information to make a good decision about what job or college you'll choose after leaving high school?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. No, I don't have enough information.	23	26	11	8	8	10	3	6	1	2
2. I have some information, but I could use a lot more.	25	38	5	11	8	11	9	11	3	5
3. I don't know if I have enough information to make a good decision.	20	20	4	8	5	6	9	4	2	2
4. I have a lot of information, but could use some more.	44	34	16	6	11	9	14	11	3	8
5. Yes, I have enough information.	26	30	3	2	3	5	2	5	18	18
- No response	1	3	0	1	0	0	0	2	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	14	20	9	6	13	18	10	8	13	12	10	14
2.	16	22	9	16	18	22	7	16	14	19	11	19
3.	13	9	7	11	13	14	7	6	11	12	9	8
4.	28	19	16	15	34	26	10	8	21	14	23	20
5.	22	21	4	9	16	21	10	9	11	12	15	18
-	0	3	1	0	0	2	1	1	0	3	1	0

44. Do you know what factors are important to consider when making your decision about what to do after high school?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I really don't know.	8	8	4	3	3	2	0	3	1	0
2. I have only a vague idea.	14	21	5	4	6	7	2	7	1	3
3. I have some idea.	39	47	12	13	9	15	15	11	3	8
4. I'm fairly sure.	44	41	12	12	10	12	15	10	7	7
5. Yes, I'm quite sure.	33	32	6	3	7	5	5	7	15	17
- No response	1	2	0	1	0	0	0	1	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	4	5	4	3	3	5	5	3	4	3	4	5
2.	8	15	6	6	7	17	7	4	8	11	6	10
3.	22	28	17	19	31	30	8	17	22	23	17	24
4.	31	22	13	19	31	25	13	16	23	21	21	20
5.	28	22	5	10	22	24	11	8	13	12	20	20
-	0	2	1	0	0	2	1	0	0	2	1	0

45. To what extent do your parents (or guardians) agree with your personal plans after high school?

	Total		9th		10th		11th		12th	
My parents (or guardians):	E	C	E	C	E	C	E	C	E	C
1. disagree <u>completely</u> with my plans.	4	3	2	0	0	2	0	1	2	0
2. disagree <u>for the most part</u> with my plans.	5	7	3	3	0	1	1	0	1	3
3. <u>sometimes</u> disagree and <u>sometimes</u> agree with my plans.	23	18	5	5	7	6	7	6	4	1
4. agree with <u>most</u> of my plans.	61	70	21	16	15	19	18	19	7	16
5. agree <u>completely</u> with my plans.	44	51	8	11	12	13	11	12	13	15
- No response	2	2	0	1	1	0	0	1	1	0

45. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	4	1	0	2	2	0	2	3	3	1	1	2
2.	2	4	3	3	3	1	2	6	4	5	1	2
3.	15	13	8	5	15	11	8	7	11	13	12	5
4.	41	44	20	26	43	49	18	21	33	32	28	38
5.	30	30	14	21	31	40	13	11	18	19	26	32
-	1	2	1	0	0	2	2	0	1	2	1	0

46. How many occupations are you now thinking about as those you might like to enter?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. None.	3	4	1	2	1	0	0	1	1	1
2. One or two.	80	78	18	16	24	23	22	20	16	19
3. Three or four.	38	55	14	16	5	15	11	12	8	12
4. Five or six.	11	7	4	1	2	2	3	2	2	2
5. Seven or more.	5	5	2	0	2	1	1	3	0	1
- No response	2	2	0	1	1	0	0	1	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	3	3	0	1	1	2	2	2	2	3	1	1
2.	50	46	30	32	49	53	31	25	34	33	46	45
3.	24	33	14	22	31	37	7	18	24	26	14	29
4.	10	6	1	1	9	6	2	1	5	4	6	3
5.	5	4	0	1	3	3	2	2	4	4	1	1
-	1	2	1	0	1	2	1	0	1	2	1	0

Below is a five-point scale that you will use to answer questions 47 through 58. This scale is designed to measure how much specific knowledge you think you have (compared to other students in your grade) concerning certain aspects about occupations.

Scale
1 - Hardly any at all
2 - A little
3 - An average amount
4 - A good deal
5 - A great deal

For the occupation you use to answer the following questions, please select that occupation you presently feel you are most likely to be working at, to earn your living, when you finish your schooling. Now, with this occupation in mind, please rate yourself (as compared to other students in your grade) on how much specific knowledge you think you have concerning the following aspects of this occupation.

47. The specific job duties and requirements

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	8	12	4	3	1	3	1	6	2	0
2. A little.	11	24	4	7	4	8	0	8	3	1
3. An average amount.	40	37	9	12	11	14	14	7	6	4
4. A good deal.	51	53	15	9	7	12	17	10	12	22
5. A great deal.	25	23	7	5	9	4	4	6	5	8
- No response	4	2	0	0	3	0	1	2	0	0

47. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	4	11	4	1	3	8	5	4	6	5	2	7
2.	6	14	5	10	7	13	4	11	5	9	6	15
3.	23	19	17	18	29	30	11	7	21	19	19	18
4.	38	34	13	19	34	36	17	17	26	25	25	28
5.	18	15	7	8	18	14	7	9	8	13	17	10
-	4	1	0	1	3	2	1	0	4	1	0	1

48. Any possible areas of specialization

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	5	13	1	2	1	6	1	5	2	0
2. A little.	18	29	6	12	4	6	5	9	3	2
3. An average amount.	36	37	8	7	11	10	13	9	4	11
4. A good deal.	54	41	18	12	7	11	14	7	15	11
5. A great deal.	22	27	6	3	9	8	3	5	4	11
- No response	4	4	0	0	3	0	1	4	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	1	6	4	7	2	6	3	7	4	5	1	8
2.	10	23	8	6	13	21	5	8	7	11	11	18
3.	23	22	13	15	25	24	11	13	13	21	23	16
4.	38	25	16	16	38	30	16	11	30	18	24	23
5.	17	15	5	12	13	19	9	8	12	15	10	12
-	4	3	0	1	3	3	1	1	4	2	0	2

49. Different types of jobs where people in this occupation might be employed.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	6	13	0	3	3	4	1	5	2	1
2. A little.	17	22	5	5	9	6	3	7	0	4
3. An average amount.	30	44	7	10	5	13	13	14	5	7
4. A good deal.	53	47	19	12	7	9	15	7	12	19
5. A great deal.	28	21	7	5	8	9	4	3	9	4
- No response	5	4	1	1	3	0	1	3	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	1	8	5	5	4	6	2	7	4	7	2	6
2.	12	14	5	8	9	17	8	5	10	7	7	15
3.	22	29	8	15	19	31	11	13	12	20	18	24
4.	37	31	16	16	39	32	14	15	27	27	26	20
5.	17	9	11	12	19	13	9	8	13	8	15	13
-	4	3	1	1	4	4	1	0	4	3	1	1

50. The specific personal qualifications of your occupation

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	5	15	2	4	2	4	1	6	0	1
2. A little.	11	11	2	2	4	4	3	5	2	0
3. An average amount.	27	47	8	13	4	12	11	13	4	9
4. A good deal.	55	54	18	11	13	16	10	7	14	20
5. A great deal.	37	21	9	5	9	5	11	6	8	5
- No response	4	3	0	1	3	0	1	2	0	0

50. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	4	12	1	3	3	12	2	3	3	7	2	8
2.	4	8	7	3	7	8	4	3	7	4	4	7
3.	17	28	10	19	19	33	8	14	15	24	12	23
4.	37	33	18	21	38	34	17	20	25	23	30	31
5.	27	11	10	10	24	13	13	8	16	12	21	9
-	4	2	0	1	3	3	1	0	4	2	0	1

51. The physical working conditions

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	5	10	0	4	4	2	1	3	0	1
2. A little.	5	21	3	5	1	8	0	6	1	2
3. An average amount.	27	41	8	11	6	13	11	11	2	6
4. A good deal.	56	51	19	10	11	12	13	12	13	17
5. A great deal.	42	25	9	5	10	6	11	5	12	9
- No response	4	3	0	1	3	0	1	2	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	3	6	2	4	3	8	2	2	2	5	3	5
2.	2	13	3	8	5	15	0	6	4	10	1	11
3.	16	25	11	16	17	25	10	16	11	16	16	25
4.	36	31	20	20	36	33	20	18	30	28	26	23
5.	32	17	10	8	30	19	12	6	19	11	23	14
-	4	2	0	1	3	3	1	0	4	2	0	1

52. The specific educational requirements or training requirements needed for entry into your occupation

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	3	7	2	3	0	3	0	1	1	0
2. A little.	14	19	3	4	6	6	3	6	2	3
3. An average amount.	33	34	10	7	8	13	13	9	2	5
4. A good deal.	45	49	13	10	13	11	8	15	11	13
5. A great deal.	40	39	11	11	5	8	12	6	12	14
- No response	4	3	0	1	3	0	1	2	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	5	1	2	1	4	2	3	1	5	2	2
2.	8	12	6	7	8	14	6	5	7	8	7	11
3.	20	20	13	14	22	22	11	12	17	12	16	22
4.	32	32	13	17	29	31	16	18	20	26	25	23
5.	27	23	13	16	31	29	9	10	21	19	19	20
-	4	2	0	1	3	3	1	0	4	2	0	1

53. The courses offered by your high school that give you the best preparation for your occupation

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	6	18	1	4	2	4	1	6	2	4
2. A little.	15	21	6	7	6	6	2	2	1	6
3. An average amount.	35	36	14	8	6	15	11	9	4	4
4. A good deal.	48	39	12	9	11	6	14	13	11	11
5. A great deal.	30	32	6	6	7	10	8	6	9	10
- No response	5	5	0	2	3	0	1	3	1	0

53. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	5	10	1	8	3	10	3	8	1	11	5	7
2.	9	13	6	8	13	14	2	7	7	10	8	11
3.	23	21	12	15	19	24	16	12	20	15	15	21
4.	30	28	18	11	33	24	15	15	22	18	26	21
5.	21	18	9	14	23	26	7	6	15	14	15	18
-	5	4	0	1	3	5	2	0	5	4	0	1

54. The extent to which people in your occupation are in demand

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	10	11	2	4	5	1	2	5	1	1
2. A little.	15	16	6	9	2	4	5	3	2	0
3. An average amount.	26	45	8	5	5	19	9	12	4	9
4. A good deal.	44	48	16	15	9	10	7	11	12	12
5. A great deal.	39	27	7	2	10	7	13	5	9	13
- No response	5	4	0	1	4	0	1	3	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	5	8	5	3	7	9	3	2	3	6	7	5
2.	8	7	7	9	7	8	8	8	8	7	7	9
3.	18	31	8	14	20	29	6	16	13	19	13	26
4.	28	34	16	14	29	38	15	10	22	24	22	24
5.	30	11	9	16	28	16	11	11	19	13	20	14
-	4	3	1	1	3	3	2	1	5	3	0	1

55. The starting salary for the average person in your occupation

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	6	21	2	7	3	5	1	6	0	3
2. A little.	8	29	3	7	2	13	2	9	1	0
3. An average amount.	42	45	12	11	10	12	14	10	6	12
4. A good deal.	40	36	11	5	8	8	9	8	12	15
5. A great deal.	38	15	11	3	8	3	10	4	9	5
- No response	5	5	0	3	4	0	1	2	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	3	16	3	5	4	18	2	3	4	6	2	15
2.	3	22	5	7	5	24	3	5	4	15	4	14
3.	27	25	15	20	25	25	17	20	19	25	23	20
4.	28	21	12	15	30	21	10	15	19	19	21	17
5.	28	7	10	8	27	10	11	5	19	4	19	11
-	4	3	1	2	3	5	2	0	5	3	0	2

56. The chances for advancement in your occupation

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	6	18	1	5	3	7	1	6	1	0
2. A little.	15	17	6	5	3	6	5	4	1	2
3. An average amount.	29	43	7	13	5	9	13	14	4	7
4. A good deal.	46	49	15	9	11	12	10	10	10	18
5. A great deal.	39	19	10	2	10	7	7	2	12	8
- No response	4	5	0	2	3	0	1	3	0	0

56. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	11	4	7	3	15	3	3	3	4	3	14
2.	10	14	5	3	10	10	5	7	6	8	9	9
3.	17	25	12	18	22	30	7	13	13	23	16	20
4.	31	30	15	19	30	30	16	19	24	24	22	25
5.	29	10	10	9	26	13	13	6	20	9	19	10
-	4	4	0	1	3	5	1	0	4	4	0	1

57. The number of different possible ways of entering your occupation

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	14	16	7	5	4	4	3	5	0	2
2. A little.	16	32	3	7	5	9	3	12	5	4
3. An average amount.	50	48	11	9	11	16	18	11	10	12
4. A good deal.	29	37	10	11	5	7	6	6	8	13
5. A great deal.	25	13	8	2	6	4	6	3	5	4
- No response	5	5	0	2	4	1	1	2	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	7	14	7	2	13	13	1	3	5	4	9	12
2.	9	20	7	12	11	21	5	11	6	16	10	16
3.	33	29	17	19	34	36	16	12	26	23	24	25
4.	24	21	5	16	21	21	8	16	16	19	13	18
5.	16	6	9	7	12	8	13	5	12	7	13	6
-	4	4	1	1	3	4	2	1	5	3	0	2

58. Now, using the same scale, rate yourself on how much knowledge you think you have about the world of work in general (not just any one occupation).

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly any at all.	5	9	1	5	3	1	0	2	1	1
2. A little.	11	22	4	2	3	10	2	8	2	2
3. An average amount.	56	71	13	16	12	17	18	16	13	22
4. A good deal.	51	36	18	8	11	10	13	10	9	8
5. A great deal.	8	8	2	2	3	3	2	1	1	2
- No response	8	5	1	3	3	0	2	2	2	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	7	3	2	1	6	4	3	4	6	1	2
2.	6	19	5	3	8	14	3	8	4	10	7	12
3.	36	41	20	30	43	53	13	18	24	28	32	43
4.	38	22	13	14	34	20	17	16	26	21	25	15
5.	4	2	4	6	3	6	5	2	5	4	3	4
-	7	3	1	2	5	4	3	1	7	3	1	2

59. Which answer best describes your experiences (either through reading or actual work) with the college or vocational school major area of study you prefer most at this time?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I have had no experience with the major and I do not know anyone in the major.	15	10	5	5	4	3	3	2	3	0
2. I have had no experience with the major, but have talked about it with others who are in the major.	22	24	5	3	3	10	9	9	5	2
3. I have worked or read in this major field. The major was suggested by another person and it is necessary for others to get me reading material (or work).	15	17	3	5	7	6	3	3	2	3
4. I have worked or read in this major field. The major was my own idea, but it is necessary for others to get me reading material (or work).	33	31	12	8	6	7	11	7	4	9
5. I have worked or read in this major field. The major was my own idea and I was able to get my own reading material (or work).	44	53	10	10	10	11	11	13	13	19
- No response	9	16	4	5	5	4	0	5	0	2

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	8	7	7	3	10	4	5	6	8	5	7	5
2.	14	13	8	11	16	14	6	10	8	9	14	15
3.	10	10	5	7	9	12	6	5	12	12	3	5
4.	22	20	11	11	24	25	9	6	18	12	15	19
5.	32	37	12	16	29	39	15	14	18	26	26	27
-	6	7	3	9	6	9	3	7	5	8	4	8

60. How would you rate your plans for "after high school"?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hazy, completely undecided.	7	4	2	2	1	0	3	1	1	1
2. Somewhat unsure.	17	21	4	4	9	8	3	7	1	2
3. Some definite, some undecided.	34	42	12	16	9	11	8	12	5	3
4. Fairly definite.	52	62	17	12	13	19	18	15	4	16
5. Definite, completely decided.	29	21	4	2	3	2	5	4	17	13
- No response	0	1	0	0	0	1	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	6	2	1	2	2	3	5	1	3	3	4	1
2.	10	18	7	3	13	16	4	5	8	15	9	6
3.	21	26	13	16	21	25	13	17	21	21	13	21
4.	33	32	19	30	38	45	14	17	25	24	27	38
5.	23	16	6	5	20	14	9	7	13	8	16	13
-	0	0	0	1	0	0	0	1	0	1	0	0

61. How likely do you think you are to change your choice of occupation by the time you finish high school?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Very likely to change my mind.	15	18	3	3	3	7	6	5	3	3
2. Rather likely to change my mind.	13	16	5	4	4	5	3	7	1	0
3. Unsure if I will change my mind.	27	39	9	11	5	7	9	10	4	11
4. Rather unlikely to change my mind.	48	42	13	15	16	12	12	8	7	7
5. Very unlikely to change my mind.	36	34	9	3	7	9	7	9	13	13
- No response	0	2	0	0	0	1	0	0	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	10	16	5	2	10	12	5	6	9	10	6	8
2.	11	10	2	6	9	11	4	5	4	9	9	7
3.	13	21	14	18	23	26	4	13	19	19	8	20
4.	31	27	17	15	31	29	17	13	23	17	25	25
5.	28	19	8	15	21	24	15	10	15	15	21	19
-	0	1	0	1	0	1	0	1	0	2	0	0

62. How likely do you think you are to change your choice of occupation by the time you're finished with your college or vocational school training?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Very likely to change my mind.	9	16	1	3	2	5	2	5	4	3
2. Rather likely to change my mind.	8	11	1	3	1	4	3	2	3	2
3. Unsure if I will change my mind.	31	35	9	9	7	5	10	11	5	10
4. Rather unlikely to change my mind.	45	42	13	12	11	13	14	9	7	8
5. Very unlikely to change my mind.	46	45	15	9	14	13	8	11	9	12
- No response	0	2	0	0	0	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	7	14	2	2	5	12	4	4	7	7	2	9
2.	7	7	1	4	6	7	2	4	3	7	5	4
3.	16	22	15	13	24	22	7	13	18	20	13	15
4.	27	25	18	17	34	28	11	14	23	18	22	24
5.	36	26	10	19	25	33	21	12	19	19	27	26
-	0	0	0	2	0	1	0	1	0	1	0	1

Use the following statements to indicate how much planning you have done for each of the topics below. These statements are to be used with items 63 through 73.

63. Plans for obtaining more information and experience to help me make my career choice.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I have <u>not considered</u> this topic.	15	6	6	2	5	2	2	2	2	0
2. I have considered this topic, but have <u>not made</u> any plans in this area.	28	46	7	12	9	13	10	11	2	10
3. <u>I am working</u> on plans in this area.	50	57	13	13	10	16	17	19	10	9

63. (cont.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
4. I have made definite plans in this area, but am not sure how to carry them out.	22	19	7	6	5	4	7	3	3	6
5. I have made definite plans in this area and am sure how I'll carry them out.	24	22	6	3	6	5	1	4	11	10
- No response	0	1	0	0	0	1	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	11	4	4	2	5	3	10	3	11	4	4	2
2.	19	33	9	13	23	28	5	18	13	26	15	20
3.	32	34	18	23	36	40	14	17	22	21	28	36
4.	17	8	5	11	12	15	10	4	11	13	11	6
5.	14	14	10	8	18	17	6	5	13	8	11	14
-	0	1	0	0	0	0	0	1	0	0	0	1

64. Plans for getting qualified for a beginning (or summer) job in the occupation I presently prefer.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I have not considered this topic.	54	27	17	9	12	4	17	6	8	8
2. I have considered this topic, but have not made any plans in this area.	37	44	10	9	10	13	7	14	10	8
3. I am working on plans in this area.	16	44	3	11	5	12	5	11	3	10
4. I have made definite plans in this area, but am not sure how to carry them out.	17	19	6	6	4	7	5	2	2	4
5. I have made definite plans in this area and am sure how I'll carry them out.	14	16	3	1	4	4	2	6	5	5
- No response	1	1	0	0	0	1	1	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	40	20	14	7	40	17	14	10	22	17	32	10
2.	26	32	11	12	26	33	11	11	23	23	14	21
3.	9	23	7	21	7	34	9	10	8	12	8	32
4.	9	11	8	8	11	12	6	7	7	13	10	6
5.	8	7	6	9	9	7	5	9	10	7	4	9
-	1	1	0	0	1	0	0	1	0	0	1	1

65. Plans to take post-high school or summer school training which leads towards my preferred occupation.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I have not considered this topic.	69	66	18	14	21	17	17	22	13	13
2. I have considered this topic, but have not made any plans in this area.	28	28	9	7	8	8	8	7	3	6

65. (cont.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
3. I am working on plans in this area.	21	26	6	8	3	6	6	6	6	6
4. I have made definite plans in this area, but am not sure how to carry them out.	7	13	3	5	1	3	3	3	0	2
5. I have made definite plans in this area and am sure how I'll carry them out.	14	15	3	1	2	5	3	1	6	8
- No response	0	3	0	1	0	2	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	46	42	23	24	50	45	19	21	32	36	37	30
2.	17	18	11	10	20	17	8	11	14	10	14	18
3.	12	17	9	9	7	20	14	6	9	11	12	15
4.	6	5	1	8	5	10	2	3	5	7	2	6
5.	12	11	2	4	12	9	2	6	10	8	4	7
-	0	1	0	2	0	2	0	1	0	0	0	3

66. Plans to talk over my decisions about an occupation with an adult who knows my situation.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I have not considered this topic.	19	18	4	6	6	6	5	4	4	2
2. I have considered this topic, but have not made any plans in this area.	27	31	7	8	8	6	9	10	3	7
3. I am working on plans in this area.	42	43	13	8	11	11	11	13	7	11
4. I have made definite plans in this area, but am not sure how to carry them out.	20	23	5	10	7	7	5	2	3	4
5. I have made definite plans in this area and am sure how I'll carry them out.	31	35	10	4	3	10	7	10	11	11
- No response	0	1	0	0	0	1	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	14	15	5	3	10	14	9	4	13	13	6	5
2.	23	20	4	11	20	18	7	13	13	15	14	16
3.	24	24	18	19	24	28	18	15	18	18	24	25
4.	12	10	8	13	15	15	5	8	13	11	7	12
5.	20	24	11	11	25	28	6	7	13	15	18	20
-	0	1	0	0	0	0	0	1	0	0	0	1

67. Plans to search through available literature on occupational or educational information.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I have not considered this topic.	23	18	3	4	9	6	4	4	7	4
2. I have considered this topic, but have not made any plans in this area.	27	40	9	9	8	10	7	8	3	13

67. (cont.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
3. I am working on plans in this area.	40	43	11	10	10	12	14	11	5	10
4. I have made definite plans in this area, but am not sure how to carry them out.	27	21	12	8	4	3	7	8	4	2
5. I have made definite plans in this area and am sure how I'll carry them out.	22	28	4	5	4	9	5	8	9	6
- No response	0	1	0	0	0	1	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	16	8	7	10	13	10	10	8	12	9	11	9
2.	21	29	6	11	19	26	8	14	11	22	16	18
3.	26	26	14	17	28	31	12	12	21	18	19	25
4.	18	10	9	11	18	13	9	8	14	12	13	9
5.	12	20	10	8	16	23	6	5	12	11	10	17
-	0	1	0	0	0	0	0	1	0	0	0	1

68. Plans to overcome short range obstacles to my long range career plans.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I have not considered this topic.	36	32	6	8	13	8	8	9	9	7
2. I have considered this topic, but have not made any plans in this area.	22	30	8	7	7	6	6	12	1	5
3. I am working on plans in this area.	46	44	17	7	6	15	14	10	9	12
4. I have made definite plans in this area, but am not sure how to carry them out.	20	25	5	11	7	5	6	5	2	4
5. I have made definite plans in this area and am sure how I'll carry them out.	15	18	3	2	2	6	3	3	7	7
- No response	0	2	0	1	0	1	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	22	21	14	11	23	21	13	11	16	16	20	16
2.	16	21	6	9	17	19	5	11	11	17	11	13
3.	33	26	13	18	27	31	19	13	20	19	26	25
4.	11	12	9	13	13	19	7	6	17	13	3	12
5.	11	13	4	5	14	13	1	5	6	7	9	11
-	0	1	0	1	0	0	0	2	0	0	0	2

69. Plans to meet possible financial needs in college by getting a part-time job.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I have not considered this topic.	27	20	8	4	7	6	5	6	7	4
2. I have considered this topic, but have not made any plans in this area.	20	32	5	7	9	11	3	8	3	6

69. (cont.)

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
3. I am working on plans in this area.	39	46	14	15	8	10	10	10	7	11
4. I have made definite plans in this area, but am not sure how to carry them out.	27	24	8	8	5	8	11	5	3	3
5. I have made definite plans in this area and am sure how I'll carry them out.	24	26	4	2	6	5	7	9	7	10
- No response	2	3	0	0	0	1	1	1	1	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	20	12	7	8	14	17	13	3	13	10	14	10
2.	15	23	5	9	16	21	4	11	10	18	10	14
3.	22	29	17	17	29	29	10	17	18	22	21	24
4.	19	9	8	15	17	18	10	6	14	10	13	14
5.	16	19	8	7	16	16	8	10	15	11	9	15
-	1	2	1	1	2	2	0	1	0	1	2	2

70. Plans to take the necessary academic course work that leads to my preferred college major.

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. I have not considered this topic.	15	11	2	1	6	2	3	3	4	5
2. I have considered this topic, but have not made any plans in this area.	13	17	8	2	4	6	1	5	0	4
3. I am working on plans in this area.	38	49	11	13	10	16	14	12	3	8
4. I have made definite plans in this area, but am not sure how to carry them out.	29	34	7	15	8	6	8	6	6	7
5. I have made definite plans in this area and am sure how I'll carry them out.	43	37	11	4	7	10	11	12	14	11
- No response	1	3	0	1	0	1	0	1	1	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	10	3	5	8	6	3	9	8	7	3	8	8
2.	8	10	5	7	10	6	3	11	7	8	6	9
3.	26	33	12	16	24	35	14	14	18	23	20	26
4.	19	18	10	16	20	26	9	8	16	20	13	14
5.	29	28	14	9	33	31	10	6	22	18	21	19
-	1	2	0	1	1	2	0	1	0	0	1	3

71. Plans for getting into my preferred occupation after I have finished my educational or vocational training.

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. I have not considered this topic.	27	17	5	4	9	7	6	5	7	1
2. I have considered this topic, but have not made any plans in this area.	34	41	9	7	11	8	5	11	9	15

71. (cont.)

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
3. I am working on plans in this area.	36	41	9	11	6	14	16	12	5	4
4. I have made definite plans in this area, but am not sure how to carry them out.	25	32	10	10	5	8	7	5	3	9
5. I have made definite plans in this area and am sure how I'll carry them out.	16	19	6	4	3	3	3	6	4	6
- No response	1	1	0	0	1	1	0	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	23	15	4	2	21	12	6	5	9	11	18	6
2.	22	28	12	13	24	29	10	12	17	20	17	21
3.	20	26	16	15	21	28	15	13	15	22	21	19
4.	16	16	9	16	16	23	9	9	20	11	5	21
5.	11	8	5	11	11	11	5	8	8	8	8	11
-	1	1	0	0	1	0	0	1	1	0	0	1

72. Plans for qualifying for a regular, stable, secure job in my preferred occupation.

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. I have not considered this topic.	30	25	5	5	12	8	6	9	7	3
2. I have considered this topic, but have not made any plans in this area.	29	46	9	13	4	7	11	14	5	12
3. I am working on plans in this area.	37	38	11	8	9	14	10	9	7	7
4. I have made definite plans in this area, but am not sure how to carry them out.	26	23	9	7	6	7	7	3	4	6
5. I have made definite plans in this area and am sure how I'll carry them out.	16	17	5	2	3	4	3	4	5	7
- No response	1	2	0	1	1	1	0	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	21	19	9	6	21	22	9	3	13	11	17	14
2.	21	32	8	14	21	31	8	15	11	26	18	20
3.	23	21	14	17	25	22	12	16	20	20	17	18
4.	15	11	11	12	16	17	10	6	17	11	9	12
5.	12	9	4	8	10	10	6	7	8	4	8	13
-	1	2	0	0	1	1	0	1	1	0	0	2

73. Plans for obtaining advancement in my preferred occupation.

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. I have not considered this topic.	47	35	12	11	16	9	12	10	7	5
2. I have considered this topic, but have not made any plans in this area.	29	38	10	5	5	9	7	11	7	13

73. (cont.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
3. I am working on plans in this area.	27	39	7	11	5	12	9	10	6	6
4. I have made definite plans in this area, but am not sure how to carry them out.	18	20	4	7	5	5	4	3	5	5
5. I have made definite plans in this area and am sure how I'll carry them out.	17	18	6	2	3	5	5	5	3	6
- No response	1	1	0	0	1	1	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	33	28	14	7	35	27	12	8	19	17	28	18
2.	19	26	10	12	18	28	11	10	13	22	16	16
3.	17	26	10	13	17	23	10	16	17	19	10	20
4.	13	5	5	15	13	15	5	5	11	9	7	11
5.	10	8	7	10	10	10	7	8	9	5	8	13
-	1	1	0	0	1	0	0	1	1	0	0	1

Below are five possible statements which are to be used with items 74 through 81. Use these statements to indicate <u>where</u> you feel the <u>responsibilities</u> for making certain decisions lie.

74. Choosing an occupation.

In this area, I feel that the responsibility is:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. in no way my own.	3	6	0	2	1	3	0	1	2	0
2. less mine and more that of others.	2	2	0	1	2	0	0	0	0	1
3. partly mine and partly that of others.	9	12	6	3	0	4	1	3	2	2
4. more mine and less that of others.	34	34	10	17	8	7	11	7	5	3
5. entirely my own.	89	95	23	12	22	27	25	27	19	29
- No response	1	2	0	1	1	0	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	4	1	2	0	1	3	5	3	3	0	3
2.	1	1	1	1	0	2	2	0	1	2	1	0
3.	5	7	4	5	3	6	6	6	6	4	3	8
4.	20	23	14	11	23	22	11	12	19	19	15	15
5.	63	58	26	37	66	70	23	25	40	43	49	52
-	1	1	0	1	1	2	0	0	0	1	1	1

75. Choosing a major field of study.

In this area, I feel that the responsibility is:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. in no way my own.	2	3	0	1	1	2	0	0	1	0
2. less mine and more that of others.	4	4	1	2	1	1	1	0	1	1
3. partly mine and partly that of others.	13	13	6	5	6	2	1	5	0	1
4. more mine and less that of others.	48	42	18	12	8	11	15	11	7	8
5. entirely my own.	70	87	14	15	17	25	20	22	19	25
- No response	1	2	0	1	1	0	0	1	0	0

75. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	1	3	1	0	0	0	2	3	2	2	0	1
2.	3	2	1	2	1	1	3	3	4	3	0	1
3.	3	4	10	9	7	4	6	9	4	5	9	8
4.	34	27	14	15	35	29	13	13	26	27	22	15
5.	50	57	20	30	49	67	21	20	33	34	37	53
-	1	1	0	1	1	2	0	0	0	1	1	1

76. Gaining entry into the next step in my plans (either college, job, or military).

In this area, I feel that the responsibility is:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. in no way my own.	5	3	1	1	2	1	0	0	2	1
2. less mine and more that of others.	4	4	2	0	1	1	0	2	1	1
3. partly mine and partly that of others.	29	31	10	10	8	9	10	9	1	3
4. more mine and less that of others.	66	74	17	17	13	19	20	16	16	22
5. entirely my own.	34	37	9	7	10	11	7	11	8	8
- No response	1	2	0	1	1	0	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	4	1	1	2	1	2	4	1	4	1	1	2
2.	3	3	1	1	1	1	3	3	3	1	1	3
3.	17	17	12	14	21	19	8	12	14	16	15	15
4.	45	50	21	24	46	51	20	23	29	38	37	36
5.	23	22	11	15	24	28	10	9	20	15	15	22
-	1	1	0	1	1	2	0	0	0	1	1	1

77. Making sure my present training is preparing me for the next step.

In this area, I feel that the responsibility is:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. in no way my own.	3	2	0	1	1	1	0	0	2	0
2. less mine and more that of others.	3	2	1	0	0	1	2	0	0	1
3. partly mine and partly that of others.	35	35	14	10	7	13	10	6	4	6
4. more mine and less that of others.	51	63	13	18	16	17	10	14	12	14
5. entirely my own.	46	47	11	6	10	9	15	18	10	14
- No response	1	2	0	1	1	0	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	1	1	1	0	0	3	2	3	1	0	1
2.	3	0	0	2	2	2	1	0	1	1	2	1
3.	17	22	18	13	24	23	11	12	19	17	16	18
4.	35	41	16	22	35	43	16	20	23	35	28	28
5.	35	29	11	18	32	33	14	14	24	17	22	30
-	1	1	0	1	1	2	0	0	0	1	1	1

78. Obtaining information about my education or occupational preferences.

In this area, I feel that the responsibility is:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. in no way my own.	4	1	0	0	2	1	0	0	2	0
2. less mine and more that of others.	5	6	3	3	0	1	2	1	0	1

78. (cont.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
3. partly mine and partly that of others.	24	27	6	7	9	8	6	3	3	9
4. more mine and less that of others.	61	63	16	16	13	17	20	20	12	10
5. entirely my own.	44	51	14	9	10	13	9	14	11	15
- No response	1	3	0	1	1	1	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	3	0	1	1	0	1	4	0	4	0	0	1
2.	4	3	1	3	4	2	1	4	3	4	2	2
3.	10	15	14	12	15	17	9	10	15	15	9	12
4.	42	38	19	25	42	45	19	18	26	31	35	32
5.	33	36	11	15	32	35	12	16	22	21	22	30
-	1	2	0	1	1	3	0	0	0	1	1	2

79. Contacting people who are able to help me make decisions.

In this area, I feel that the responsibility is:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. in no way my own.	5	3	1	1	2	1	0	1	2	0
2. less mine and more that of others.	7	4	2	0	1	1	3	1	1	2
3. partly mine and partly that of others.	21	24	8	7	7	5	3	6	3	6
4. more mine and less that of others.	46	61	13	15	12	23	13	14	8	9
5. entirely my own.	59	57	15	12	12	11	18	16	14	18
- No response	1	2	0	1	1	0	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	1	3	2	2	0	3	3	4	1	1	2
2.	2	2	5	2	4	2	3	2	4	3	3	1
3.	13	10	8	14	12	17	9	7	12	13	9	11
4.	28	41	18	20	30	42	16	19	23	31	23	30
5.	47	39	12	18	45	40	14	17	27	23	32	34
-	1	1	0	1	1	2	0	0	0	1	1	1

80. Gaining work experience in the field of my preferred occupation.

In this area, I feel that the responsibility is:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. in no way my own.	6	4	2	2	1	1	1	0	2	1
2. less mine and more that of others.	8	11	1	3	1	5	4	2	2	1
3. partly mine and partly that of others.	18	19	6	5	7	4	4	7	1	3
4. more mine and less that of others.	52	46	19	14	13	17	12	8	8	7
5. entirely my own.	53	68	11	11	12	13	16	21	14	23
- No response	2	3	0	1	1	1	0	1	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	3	2	3	2	2	2	4	2	5	3	1	1
2.	3	2	5	9	5	6	3	5	3	5	5	6
3.	9	12	9	7	13	15	5	4	10	10	8	9
4.	34	31	18	15	36	29	16	17	24	24	28	22
5.	43	45	10	23	36	48	17	20	27	29	26	39
-	1	2	1	1	2	3	0	0	1	1	1	2

81. Visiting the college I might like to attend.

In this area, I feel that the responsibility is:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. in no way my own.	9	10	2	2	3	1	2	5	2	2
2. less mine and more that of others.	7	7	1	4	2	1	2	2	2	0
3. partly mine and partly that of others.	36	31	14	10	10	12	9	3	3	6
4. more mine and less that of others.	43	40	13	11	11	14	14	11	5	4
5. entirely my own.	43	58	9	7	8	12	10	16	16	23
- No response	1	5	0	2	1	1	0	2	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	5	5	4	5	1	3	8	7	5	4	4	6
2.	3	4	4	3	3	4	4	3	4	5	3	2
3.	23	15	13	16	29	20	7	11	19	18	17	13
4.	30	30	13	10	28	30	15	10	16	24	27	16
5.	31	37	12	21	32	41	11	17	26	20	17	38
-	1	3	0	2	1	5	0	0	0	1	1	4

Below are five possible statements to be used with items 82 through 98. Now read the following items and choose the statement that best describes your situation.

82. To what extent has your school's guidance program lived up to your expectations?

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Hardly at all.	24	40	5	13	7	18	4	5	8	4
2. To only some extent.	34	31	10	7	9	9	10	10	5	5
3. To an average extent.	32	41	10	8	8	9	9	13	5	11
4. To a pretty good extent.	38	26	11	6	8	3	12	6	7	11
5. To a great extent.	9	13	2	2	2	2	2	5	3	4
- No response	2	0	1	0	1	0	0	0	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	20	29	4	11	15	28	9	12	11	16	13	24
2.	20	20	14	11	28	20	6	11	16	17	18	14
3.	23	26	9	15	24	29	8	12	17	18	15	23
4.	26	16	12	10	23	17	15	9	22	15	16	11
5.	4	3	5	10	3	9	6	4	4	6	5	7
-	0	0	2	0	1	0	1	0	0	0	2	0

83. To what extent has the counseling you have received in the area of <u>educational</u> planning been effective?

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Hardly at all.	19	31	6	9	6	13	2	4	5	5
2. To only some extent.	38	31	10	5	12	10	11	12	5	4
3. To an average extent.	37	43	12	13	9	13	11	9	5	8
4. To a pretty good extent.	30	38	5	7	5	4	10	11	10	16
5. To a great extent.	13	8	5	2	2	1	3	3	3	2
- No response	2	0	1	0	1	0	0	0	0	0

83. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	13	20	6	11	14	26	5	5	8	12	11	19
2.	27	23	11	8	29	17	9	14	17	15	21	16
3.	24	28	13	15	25	27	12	16	23	21	14	22
4.	22	21	8	17	20	28	10	10	14	21	16	17
5.	7	2	6	6	5	5	8	3	8	3	5	5
-	0	0	2	0	1	0	1	0	0	0	2	0

84. To what extent has the counseling you have received in the area of <u>occupational</u> planning been effective?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	34	49	8	13	10	19	7	10	9	7
2. To only some extent.	32	33	10	6	7	9	11	14	4	4
3. To an average extent.	35	35	9	10	11	7	9	8	6	10
4. To a pretty good extent.	26	25	9	5	4	4	8	5	5	11
5. To a great extent.	8	8	2	2	1	2	2	2	3	2
- No response	4	1	1	0	2	0	0	0	1	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	21	38	13	11	28	39	6	10	10	18	24	31
2.	23	19	9	14	26	21	6	12	17	17	15	16
3.	22	25	13	10	20	24	15	11	22	21	13	14
4.	21	9	5	16	14	12	12	13	16	11	10	14
5.	4	2	4	6	3	6	5	2	3	4	5	4
-	2	1	2	0	3	1	1	0	2	1	2	0

85. To what extent have your counselors shown to you that they understood your feelings and your problems?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	39	40	13	10	11	15	7	9	8	6
2. To only some extent.	27	33	7	9	9	10	7	9	4	5
3. To an average extent.	32	31	8	8	6	7	13	7	5	9
4. To a pretty good extent.	26	36	8	7	6	8	6	9	6	12
5. To a great extent.	13	11	2	2	2	1	4	5	5	3
- No response	2	0	1	0	1	0	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	25	30	14	10	33	31	6	9	13	18	26	22
2.	18	22	9	11	17	20	10	13	15	15	12	18
3.	27	17	5	14	21	23	11	8	18	16	14	15
4.	16	21	10	15	16	25	10	11	16	18	10	18
5.	7	4	6	7	6	4	7	7	8	5	5	6
-	0	0	2	0	1	0	1	0	0	0	2	0

86. To what extent have your counselors helped you find <u>definite paths</u> of action in reaching your goals?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	48	49	20	14	12	20	7	11	9	4
2. To only some extent.	26	37	7	12	7	10	7	9	5	6

86. (cont.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
3. To an average extent.	35	36	7	5	10	8	12	11	6	12
4. To a pretty good extent.	21	21	3	4	4	3	11	7	3	7
5. To a great extent.	7	8	1	1	1	0	0	1	5	6
- No response	2	0	1	0	1	0	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	34	36	14	13	37	39	11	10	18	19	30	30
2.	17	18	9	19	16	22	10	15	15	20	11	17
3.	27	24	8	12	23	27	12	9	20	17	15	19
4.	12	10	9	11	15	12	6	9	13	12	8	9
5.	3	6	4	2	2	3	5	5	4	4	3	4
-	0	0	2	0	1	0	1	0	0	0	2	0

87. To what extent have your counselors helped you understand how your <u>strengths</u> and <u>weaknesses</u> fit in with your <u>occupational</u> goals?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	53	50	17	11	14	15	7	14	15	10
2. To only some extent.	22	44	7	9	5	16	8	13	2	6
3. To an average extent.	35	26	11	7	8	5	12	7	4	7
4. To a pretty good extent.	18	22	1	7	6	4	8	3	3	8
5. To a great extent.	8	9	2	2	1	1	2	2	3	4
- No response	3	0	1	0	1	0	0	0	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	35	37	18	13	39	38	14	12	20	26	33	24
2.	17	30	5	14	17	33	5	11	15	16	7	28
3.	23	16	12	10	22	15	13	11	17	14	18	12
4.	12	8	6	14	12	14	6	8	12	14	6	8
5.	5	3	3	6	2	3	6	6	5	2	3	7
-	1	0	2	0	2	0	1	0	1	0	2	0

88. To what extent have your counselors helped you understand how your <u>strengths</u> and <u>weaknesses</u> fit in with your <u>educational</u> goals?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	40	33	14	7	7	12	8	7	11	7
2. To only some extent.	23	45	6	9	10	17	5	14	2	5
3. To an average extent.	42	33	12	9	11	7	11	9	8	8
4. To a pretty good extent.	22	28	4	8	4	4	10	5	4	11
5. To a great extent.	10	12	2	3	2	1	3	4	3	4
- No response	2	0	1	0	1	0	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	27	21	13	12	30	23	10	10	12	16	28	17
2.	14	33	9	12	18	31	5	14	14	19	9	26
3.	32	20	10	13	23	21	19	12	23	19	19	14
4.	14	18	8	10	18	23	4	5	17	16	5	12
5.	6	2	4	10	4	5	6	7	4	2	6	10
-	0	0	2	0	1	0	1	0	0	0	2	0

89. To what extent have your counselors discussed your problems and feelings with you, in words that had real meaning to you?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	57	66	16	15	13	23	11	16	17	12
2. To only some extent.	30	26	6	8	9	5	13	7	2	6
3. To an average extent.	29	29	9	7	8	7	9	9	3	6
4. To a pretty good extent.	14	20	5	4	3	3	3	7	3	6
5. To a great extent.	6	10	2	2	1	3	1	0	2	5
- No response	3	0	1	0	1	0	0	0	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	43	48	14	18	43	50	14	16	21	29	36	37
2.	18	19	12	7	21	18	9	8	16	11	14	15
3.	17	14	12	15	17	19	12	10	16	18	13	11
4.	10	11	4	9	10	10	4	10	11	11	3	9
5.	4	2	2	8	2	6	4	4	5	3	1	7
-	1	0	2	0	1	0	2	0	1	0	2	0

90. To what extent have your counselors helped you <u>find new information</u> about your situation that helped you make decisions?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	52	57	19	15	14	23	8	14	11	5
2. To only some extent.	32	35	8	12	9	8	11	8	4	7
3. To an average extent.	28	35	6	4	8	7	9	13	5	11
4. To a pretty good extent.	16	13	4	2	1	2	6	1	5	8
5. To a great extent.	8	11	1	3	1	1	3	3	3	4
- No response	3	0	1	0	2	0	0	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	37	38	15	19	41	38	11	19	20	22	32	35
2.	20	21	12	14	20	26	12	9	23	22	9	13
3.	19	23	9	12	18	24	10	11	13	18	15	17
4.	13	6	3	7	8	9	8	4	9	6	7	7
5.	3	6	5	5	5	6	3	5	4	4	4	7
-	1	0	2	0	2	0	1	0	1	0	2	0

91. To what extent have your counselors made you <u>feel more aware</u> of the possible <u>occupational</u> alternatives you have?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	47	57	14	12	11	21	9	13	13	11
2. To only some extent.	34	37	12	11	10	9	7	11	5	6
3. To an average extent.	26	32	6	7	7	8	10	9	3	8
4. To a pretty good extent.	17	18	3	6	3	3	7	4	4	5
5. To a great extent.	13	6	3	0	3	0	4	2	3	4
- No response	2	1	1	0	1	0	0	0	0	1

91. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	32	44	15	13	40	46	7	11	16	27	31	30
2.	23	22	11	15	24	25	10	12	22	16	12	21
3.	19	19	7	13	13	15	13	17	14	17	12	15
4.	12	6	5	12	10	14	7	4	11	9	6	9
5.	7	2	6	4	6	2	7	4	7	2	6	4
-	0	1	2	0	1	1	1	0	0	1	2	0

92. To what extent have your counselors made you <u>feel more aware</u> of the possible <u>educational</u> alternatives you have?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	47	47	17	12	9	18	9	10	12	7
2. To only some extent.	24	31	3	6	10	10	9	10	2	5
3. To an average extent.	34	36	12	9	8	7	8	12	6	8
4. To a pretty good extent.	22	28	3	8	4	5	9	6	6	9
5. To a great extent.	8	9	2	1	3	1	1	1	2	6
- No response	3	0	1	0	1	0	1	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	32	32	15	15	35	36	12	11	18	20	29	27
2.	16	21	8	10	18	19	6	12	17	15	7	16
3.	23	23	11	13	22	23	12	13	19	17	15	19
4.	16	14	6	14	15	21	7	7	12	16	10	12
5.	4	4	4	5	3	4	5	5	3	4	5	5
-	1	0	2	0	1	0	2	0	0	0	3	0

93. To what extent have your counselors helped you become aware of the <u>important factors</u> on which to base your <u>occupational</u> decisions?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	44	57	16	14	11	20	5	14	12	9
2. To only some extent.	33	32	10	6	8	11	11	8	4	7
3. To an average extent.	37	32	9	9	11	9	10	6	7	8
4. To a pretty good extent.	17	21	3	3	4	0	8	10	2	8
5. To a great extent.	5	8	1	4	0	1	2	1	2	2
- No response	3	1	0	0	1	0	1	0	1	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	33	41	11	16	34	42	10	15	17	29	27	28
2.	22	23	11	9	22	20	11	12	21	16	12	16
3.	23	19	14	13	26	23	11	9	17	15	20	17
4.	12	7	4	14	10	13	7	8	12	8	5	13
5.	3	3	2	5	1	4	4	4	2	3	3	5
-	0	1	3	0	1	1	2	0	1	1	2	0

94. To what extent have your counselors helped you become more aware of the important factors on which to base your educational decisions?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	36	37	14	11	10	14	3	8	9	4
2. To only some extent.	26	45	8	9	10	15	6	13	2	8
3. To an average extent.	35	28	8	7	6	10	13	7	8	4
4. To a pretty good extent.	32	31	8	8	7	2	12	6	5	15
5. To a great extent.	7	10	1	1	1	0	2	5	3	4
- No response	3	0	0	0	1	0	1	0	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	27	22	9	15	26	28	10	9	13	17	23	20
2.	18	33	8	12	19	29	7	16	14	22	12	23
3.	21	19	14	9	22	19	13	9	18	11	17	17
4.	23	15	9	16	23	23	9	8	22	19	10	12
5.	4	5	3	5	3	4	4	6	2	3	5	7
-	0	0	3	0	1	0	2	0	1	0	2	0

95. To what extent have your counselors helped you make better occupational decisions?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	58	72	19	23	15	23	10	14	14	12
2. To only some extent.	26	32	8	7	9	7	6	9	3	9
3. To an average extent.	35	28	9	3	8	8	13	11	5	6
4. To a pretty good extent.	12	9	2	2	2	2	6	1	2	4
5. To a great extent.	4	8	1	0	0	1	1	4	2	3
- No response	4	2	0	1	1	0	1	0	2	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	43	53	15	19	46	56	12	16	24	33	34	39
2.	17	19	9	13	18	19	8	13	13	17	13	15
3.	23	16	12	12	21	19	14	9	20	13	15	15
4.	6	2	6	7	6	5	6	4	9	5	3	4
5.	3	2	1	6	1	3	3	5	2	2	2	6
-	1	2	3	0	2	1	2	1	2	2	2	0

96. To what extent have your counselors helped you make better educational decisions?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	40	34	15	6	9	15	6	10	10	3
2. To only some extent.	25	45	7	12	10	12	8	12	0	9
3. To an average extent.	37	35	9	10	11	9	10	8	7	8
4. To a pretty good extent.	27	29	7	8	3	4	9	5	8	12
5. To a pretty good extent.	7	8	1	0	1	1	3	4	2	3
- No response	3	0	0	0	1	0	1	0	1	0

96. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	29	21	11	12	30	23	10	11	16	9	24	25
2.	17	31	8	14	17	31	8	14	13	24	12	21
3.	26	22	11	13	23	23	14	12	22	20	15	15
4.	18	17	9	12	21	21	6	8	15	16	12	13
5.	3	3	4	5	2	5	5	3	3	3	4	5
-	0	0	3	0	1	0	2	0	1	0	2	0

97. To what extent have your counselors helped you become a more effective person in general?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	59	62	18	16	14	18	12	15	15	13
2. To only some extent.	25	36	7	7	10	9	6	9	2	11
3. To an average extent.	38	38	8	9	8	11	15	12	7	6
4. To a pretty good extent.	10	12	4	3	1	3	2	2	3	4
5. To a great extent.	3	3	1	1	1	0	1	1	0	1
- No response	4	0	1	0	1	0	1	0	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	44	47	15	15	47	51	12	11	26	31	33	31
2.	16	17	9	19	20	22	5	14	12	17	13	19
3.	23	22	15	16	19	24	19	14	22	17	16	21
4.	6	7	4	5	6	6	4	6	7	6	3	6
5.	3	1	0	2	1	0	2	3	2	1	1	2
-	1	0	3	0	1	0	3	0	1	0	3	0

98. To what extent have your counselors dealt with problems that are important to you?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	55	59	16	16	16	21	11	12	12	10
2. To only some extent.	22	43	8	10	6	11	7	12	1	10
3. To an average extent.	32	31	7	7	6	7	9	10	10	7
4. To a pretty good extent.	16	12	5	2	3	2	5	3	3	5
5. To a great extent.	6	6	2	1	1	0	2	2	1	3
- No response	8	0	1	0	3	0	3	0	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	37	42	18	17	43	47	12	12	26	24	29	35
2.	15	23	7	20	18	28	4	15	12	21	10	22
3.	25	22	7	9	18	19	14	12	15	18	17	13
4.	7	4	9	8	9	8	7	4	12	7	4	5
5.	4	3	2	3	1	1	5	5	3	2	3	4
-	5	0	3	0	5	0	3	0	2	0	6	0

Responses to items 99 and 100 were coded on the basis of several different characteristics. These characteristics were selected and the categories within each were chosen on the basis of a random sample of approximately 75% of the responses to the pre-trial student questionnaire. The characteristics are as

indicated by the headings (a,b,c,d,e) under questions 99 and 100. Additional analyses of responses to questions 99 and 100 are on file. For information please contact Professor Donald E. Super, Teachers College, Columbia University.

99. Considering your plans for after high school, what would you have liked your counselors to offer <u>you</u>, so that you could be <u>better prepared</u> to make decisions about your future?

(a) Indicate whether the student:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. wants something more.	85	103	26	24	20	33	19	26	20	20
2. is not getting something.	0	0	0	0	0	0	0	0	0	0
3. is getting something that is not much help to his situation.	0	0	0	0	0	0	0	0	0	0
4. hasn't recently talked to his counselor.	2	2	0	2	1	0	1	0	0	0
5. is receiving "no help" from his counselor.	1	1	0	0	1	1	0	0	0	0
6. is receiving enough help.	7	8	1	1	1	1	2	2	3	4
7. "doesn't know".	6	3	2	2	1	0	2	1	1	0
8. other or "none".	1	2	0	0	1	0	0	1	0	1
9. doesn't go to his counselor - by choice or otherwise.	0	2	0	0	0	0	0	1	0	1
- No response or can't classify	37	30	10	7	10	6	13	8	4	9

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	57	68	28	35	57	73	28	30	42	48	43	55
2.	0	0	0	0	0	0	0	0	0	0	0	0
3.	0	0	0	0	0	0	0	0	0	0	0	0
4.	2	2	0	0	2	2	0	0	0	1	2	1
5.	1	1	0	0	1	1	0	0	0	0	1	1
6.	5	5	2	3	4	3	3	5	4	2	3	6
7.	4	1	2	2	6	3	0	0	2	3	4	0
8.	1	1	0	1	0	2	1	0	1	1	0	1
9.	0	2	0	0	0	2	0	0	0	2	0	0
-	23	14	14	16	24	17	13	13	21	15	16	15

(b) Is the student:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. satisfied with the present state of affairs (independent of wanting more, etc.)?	0	4	0	1	0	1	0	1	0	1
2. dissatisfied with the present state of affairs (independent of wanting more, etc.)?	2	3	0	0	0	2	1	0	1	1
3. Implied satisfaction (rater interpreted).	0	1	0	0	0	0	0	1	0	0
4. Implied Dissatisfaction (rater interpreted).	83	99	25	24	20	31	19	25	19	19
- No response or can't classify	54	44	14	11	15	7	17	12	8	14

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	0	2	0	2	0	4	0	0	0	1	0	3
2.	2	2	0	1	2	3	0	0	0	0	2	3
3.	0	0	0	1	0	1	0	0	0	0	0	1
4.	55	66	28	33	56	69	27	30	41	48	42	51
-	36	24	18	20	36	26	18	18	29	23	25	21

(c) Is the student's expression:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. general.	23	24	8	10	4	6	5	5	6	3
2.	35	36	9	8	9	14	8	9	9	5
3. specific.	21	34	6	7	6	9	5	8	4	10
4.	6	11	3	0	1	5	1	4	1	2
5. very specific.	0	2	0	0	0	0	0	1	0	1
- No response or can't classify	53	44	13	11	15	7	17	12	8	14

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	17	13	6	11	15	13	8	11	13	11	10	13
2.	22	27	13	9	24	22	11	14	21	20	14	16
3.	15	23	6	11	14	29	7	5	6	15	15	19
4.	3	6	3	5	4	11	2	0	2	2	4	9
5.	0	1	0	1	0	2	0	0	0	1	0	1
-	35	24	18	20	36	26	17	18	28	23	25	21

(d) Is the student seeking:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. consideration of his <u>personal</u> situation?	12	17	3	4	3	6	2	2	4	5
2. consideration of <u>information</u> about the world?	17	22	5	6	4	7	6	5	2	4
3. consideration of a <u>relationship</u> between some <u>standard relationships</u> of 1 and 2 above?	1	0	0	0	0	0	1	0	0	0
4. consideration of specific <u>relationships</u> within 1 above?	1	2	0	0	0	1	0	1	1	0
5. consideration of specific <u>relationships</u> within 2 above?	2	1	0	0	1	1	0	0	1	0
6. consideration of specific <u>relationships</u> between 1 and 2 above?	43	60	13	13	11	17	8	18	11	12
7. more of anything?	10	5	5	2	1	2	3	1	1	0
- No response or can't classify	53	44	13	11	15	7	17	12	8	14

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	9	6	3	11	6	11	6	6	2	7	10	10
2.	15	19	2	3	11	14	6	8	15	12	2	10
3.	1	0	0	0	1	0	0	0	0	0	1	0
4.	1	2	0	0	1	2	0	0	0	0	1	2
5.	1	1	1	0	2	1	0	0	2	1	0	0
6.	23	40	20	20	29	45	14	15	17	28	26	32
7.	8	2	2	3	8	4	2	1	6	1	4	4
-	35	24	18	20	36	26	17	18	28	23	25	21

(e) The number of items to follow, that were mentioned by the student	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1	9	10	1	4	0	3	4	2	4	1
2	21	25	4	4	4	9	7	6	6	6
3	31	41	10	8	10	12	4	12	7	9
4	9	20	3	7	4	4	1	5	1	4
5	5	4	2	0	1	3	1	1	1	0
6	1	2	1	0	0	1	0	0	0	1
-	63	49	18	13	16	9	20	13	9	14

(e) (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1	8	4	1	6	3	5	6	5	3	6	6	4
2	14	21	7	4	15	17	6	8	14	12	7	13
3	19	26	12	15	23	28	8	13	16	20	15	21
4	4	14	5	6	5	17	4	3	3	10	6	10
5	4	3	1	1	3	4	2	0	0	0	5	4
6	1	0	0	2	1	2	0	0	0	0	1	2
-	43	26	20	23	44	30	19	19	34	24	29	25

100. What kind of help are you getting from your counselors now that is not helping you, or that you don't want?

(a) Indicate whether the student:

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. wants something more.	1	0	1	0	0	0	0	0	0	0
2. is not getting something.	2	5	0	0	0	3	1	2	1	0
3. is getting something that is not much help to his situation.	5	12	1	3	2	7	2	0	0	2
4. hasn't recently talked to his counselor.	2	2	1	1	0	0	0	0	1	1
5. is receiving "no help" from his counselor.	35	44	11	13	12	15	4	10	8	6
6. is receiving enough help.	8	8	1	1	4	1	3	4	0	2
7. "doesn't know".	2	1	1	1	1	0	0	0	0	0
8. other or "none".	40	39	15	6	8	8	8	15	9	10
9. doesn't go to his counselor - by choice or otherwise.	1	3	0	1	1	0	0	1	0	1
- No response or can't classify	43	37	8	10	7	7	19	7	9	13

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	0	0	1	0	0	0	1	0	1	0	0	0
2.	1	4	1	1	2	4	0	1	2	2	0	3
3.	2	8	3	4	4	9	1	3	2	5	3	7
4.	1	1	1	1	0	2	2	0	1	1	1	1
5.	28	28	7	16	24	31	11	13	10	12	25	32
6.	7	3	1	5	4	3	4	5	2	2	6	6
7.	2	1	0	0	2	1	0	0	2	0	0	1
8.	29	29	11	10	31	28	9	11	24	26	16	13
9.	0	3	1	0	1	3	0	0	1	2	0	1
-	23	17	20	20	26	22	17	15	25	22	18	15

(b) Is the student:

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. satisfied with the present state of affairs (independent of wanting more, etc.)?	0	0	0	0	0	0	0	0	0	0
2. dissatisfied with the present state of affairs (independent of wanting more, etc.)?	4	7	1	1	2	4	1	1	0	1
3. Implied satisfaction (rater interpreted)	0	0	0	0	0	0	0	0	0	0
4. Implied dissatisfaction (rater interpreted)	4	10	1	2	0	6	2	1	1	1
- No response or can't classify	131	134	37	33	33	31	34	37	26	33

(b) (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	0	0	0	0	0	0	0	0	0	0	0	0
2.	2	5	2	2	4	5	0	2	1	2	3	5
3.	0	0	0	0	0	0	0	0	0	0	0	0
4.	1	7	3	3	2	8	2	2	4	5	0	5
-	90	82	41	52	88	90	43	44	65	65	66	69

(c) Is the student's expression:

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. general.	1	6	0	2	0	4	0	0	1	0
2.	2	5	0	1	0	1	2	1	0	2
3. specific.	5	6	2	0	2	5	1	1	0	0
4.	0	0	0	0	0	0	0	0	0	0
5. very specific.	0	0	0	0	0	0	0	0	0	0
- No response or can't classify	131	134	37	33	33	31	34	37	27	33

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	0	4	1	2	1	5	0	1	1	4	0	2
2.	1	2	1	3	1	4	1	1	2	3	0	2
3.	2	6	3	0	4	4	1	2	2	0	3	6
4.	0	0	0	0	0	0	0	0	0	0	0	0
5.	0	0	0	0	0	0	0	0	0	0	0	0
-	90	82	41	52	88	90	43	44	65	65	66	69

(d) Is the student seeking:

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. consideration of his <u>personal</u> situation?	2	3	0	0	1	1	1	2	0	0
2. consideration of <u>information</u> about the world?	3	9	2	3	0	6	1	0	0	0
3. consideration of a <u>relationship</u> between some <u>standard relationship</u> of 1 and 2 above?	0	0	0	0	0	0	0	0	0	0
4. consideration of specific <u>relationships</u> within 1 above?	0	0	0	0	0	0	0	0	0	0
5. consideration of specific <u>relationships</u> within 2 above?	0	0	0	0	0	0	0	0	0	0
6. consideration of specific <u>relationships</u> between 1 and 2 above?	3	5	0	0	1	3	1	0	1	2
7. more of anything?	0	0	0	0	0	0	0	0	0	0
- No response or can't classify	131	134	37	33	33	31	34	37	27	33

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	1	3	1	0	2	3	0	0	1	1	1	2
2.	1	6	2	3	2	8	1	1	2	5	1	4
3.	0	0	0	0	0	0	0	0	0	0	0	0
4.	0	0	0	0	0	0	0	0	0	0	0	0
5.	0	0	0	0	0	0	0	0	0	0	0	0
6.	1	3	2	2	2	2	1	3	2	1	1	4
7.	0	0	0	0	0	0	0	0	0	0	0	0
-	90	82	41	52	88	90	43	44	65	65	66	69

(e) The number of items to follow, that were mentioned by the student:

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1	2	7	1	1	0	5	1	1	0	0
2	5	8	0	2	2	3	2	1	1	2
3	1	2	1	0	0	2	0	0	0	0
-	131	134	37	33	33	31	34	37	27	33

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1	2	6	0	1	2	6	0	1	1	2	1	5
2	1	4	4	4	4	7	1	1	3	4	2	4
3	0	2	1	0	0	0	1	2	1	1	0	1
-	90	82	41	52	88	90	43	44	65	65	66	69

101. In what grade do you feel a student should begin <u>to start thinking</u> about educational and occupational planning?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
5	4	12	1	2	1	3	1	1	1	6
6	3	6	1	0	1	2	1	2	0	2
7	20	13	8	4	4	5	3	3	5	1
8	34	29	12	11	12	6	7	8	3	4
9	49	53	10	12	9	10	18	18	12	13
10	18	29	7	5	5	11	3	5	3	8
11	4	5	0	1	3	3	1	1	0	0
12	0	0	0	0	0	0	0	0	0	0
-	5	3	0	1	0	1	3	1	2	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
5	3	6	1	6	2	9	2	3	2	7	2	5
6	1	4	2	2	2	3	1	3	3	1	0	5
7	13	8	7	5	15	11	5	2	9	6	11	7
8	20	24	14	5	20	20	14	9	16	19	18	10
9	36	26	13	27	35	35	14	18	24	20	25	33
10	12	20	6	9	12	17	6	12	8	15	10	14
11	4	4	0	1	2	4	2	1	4	2	0	3
12	0	0	0	0	0	0	0	0	0	0	0	0
-	3	2	2	1	5	3	0	0	2	1	3	2

102. In what grade do you feel a student should begin to start <u>serious planning</u> for his educational and occupational future?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
5	0	2	0	1	0	0	0	0	0	1
6	1	1	1	1	0	0	0	0	0	0
7	8	2	1	0	4	2	0	0	3	0
8	3	8	1	2	1	1	1	3	0	2
9	47	31	20	7	5	11	13	5	9	8
10	28	39	6	10	11	9	10	13	1	7
11	42	59	8	14	12	13	11	16	11	16
12	0	0	0	0	0	0	0	0	0	0
-	4	2	1	0	0	1	2	1	1	0

102. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
5	0	0	0	2	0	1	0	1	0	2	0	0
6	1	1	0	0	1	1	0	0	1	1	0	0
7	6	0	2	2	4	0	4	2	4	0	4	2
8	2	6	1	2	2	6	1	2	2	2	1	6
9	26	21	21	10	31	22	16	9	21	17	26	14
10	20	23	8	16	19	25	9	14	14	13	14	26
11	32	37	10	22	30	40	12	19	21	31	21	28
12	0	0	0	0	0	0	0	0	0	0	0	0
-	3	1	1	1	4	2	0	0	3	2	1	0

Below are five possible statements which are to be used with items 103 through 111. Use these statements to indicate the extent to which the following people are actually helping you in your planning and decision making for your career.

103. Your father or male guardian.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Not helping.	31	26	8	6	10	8	8	9	5	3
2. Helping, but only to a small degree.	23	18	7	4	3	6	9	4	4	4
3. Helping somewhat.	34	41	7	8	10	13	10	13	7	7
4. Helping a lot.	26	32	6	9	8	5	7	7	5	11
5. Helping very much.	23	31	10	8	4	8	3	6	6	9
- No response	2	3	1	1	0	1	0	0	1	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	22	11	9	15	19	16	12	10	13	11	18	15
2.	13	11	10	7	13	8	10	10	12	9	11	9
3.	21	27	13	14	24	27	10	14	18	23	16	18
4.	19	20	7	12	18	26	8	6	12	18	14	14
5.	16	25	7	6	18	25	5	6	14	11	9	20
-	2	0	0	3	2	1	0	2	1	0	1	3

104. Your mother or female guardian.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Not helping.	17	11	3	3	8	3	4	4	2	1
2. Helping, but only to a small degree.	20	21	10	2	4	4	4	8	2	7
3. Helping somewhat.	40	49	10	13	11	16	13	12	6	8
4. Helping a lot.	33	37	7	11	8	9	10	6	8	11
5. Helping very much.	28	33	9	7	4	9	6	9	9	8
- No response	1	0	0	0	0	0	0	0	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	12	4	5	7	6	9	11	2	8	6	9	5
2.	16	15	4	6	11	10	9	11	13	15	7	6
3.	27	32	13	17	31	33	9	16	21	22	19	27
4.	18	22	15	15	22	26	11	11	10	19	23	18
5.	19	21	9	12	23	25	5	8	17	10	11	23
-	1	0	0	0	1	0	0	0	1	0	0	0

105. Your school counselors.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Not helping.	41	48	15	11	9	19	6	11	11	7
2. Helping, but only to a small degree.	23	41	7	10	3	14	9	11	4	6
3. Helping somewhat.	40	35	11	12	12	3	13	11	4	9
4. Helping a lot.	25	19	4	2	8	3	8	5	5	9
5. Helping very much.	9	8	2	1	3	2	1	1	3	4
- No response	1	0	0	0	0	0	0	0	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	30	35	11	13	29	33	12	15	14	18	27	30
2.	15	28	8	13	15	31	8	10	14	21	9	20
3.	26	19	14	16	31	23	9	12	25	19	15	16
4.	17	10	8	9	15	10	10	9	10	10	15	9
5.	4	2	5	6	3	6	6	2	6	4	3	4
-	1	0	0	0	1	0	0	0	1	0	0	0

106. Your teachers.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Not helping.	54	47	17	8	15	13	12	15	10	11
2. Helping, but only to a small degree.	30	44	11	11	7	15	9	8	3	10
3. Helping somewhat.	32	36	8	11	8	8	8	9	8	8
4. Helping a lot.	21	17	3	4	4	3	8	6	6	4
5. Helping very much.	1	6	0	1	1	2	0	1	0	2
- No response	1	1	0	1	0	0	0	0	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	34	27	20	20	33	33	21	14	20	16	34	31
2.	24	31	6	13	22	30	8	14	19	30	11	14
3.	20	25	12	11	25	23	7	13	20	17	12	19
4.	13	8	8	9	12	12	9	5	10	5	11	12
5.	1	2	0	4	1	4	0	2	0	4	1	2
-	1	1	0	0	1	1	0	0	1	0	0	1

107. Your brothers, sisters, or relatives.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Not helping.	56	60	20	18	13	18	14	14	9	10
2. Helping, but only to a small degree.	21	34	7	7	5	9	7	9	2	9
3. Helping somewhat.	37	30	9	5	9	8	10	8	9	9
4. Helping a lot.	15	16	2	3	5	4	4	6	4	3
5. Helping very much.	9	11	1	3	3	2	2	2	3	4
- No response	1	0	0	0	0	0	0	0	1	0

107. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	39	37	17	23	36	45	20	15	27	34	29	26
2.	11	20	10	14	14	18	7	16	13	19	8	15
3.	27	22	10	8	28	21	9	9	14	13	23	17
4.	10	10	5	6	10	10	5	6	8	4	7	12
5.	5	5	4	6	5	9	4	2	7	2	2	9
-	1	0	0	0	1	0	0	0	1	0	0	0

108. Coaches.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Not helping.	98	116	28	25	26	31	28	32	16	28
2. Helping, but only to a small degree.	18	13	5	4	5	7	2	0	6	2
3. Helping somewhat.	9	11	3	3	2	1	2	3	2	4
4. Helping a lot.	6	4	0	2	0	0	4	2	2	0
5. Helping very much.	2	3	1	0	0	1	0	1	1	1
- No response	6	4	2	2	2	1	1	1	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	70	79	28	37	66	81	32	35	43	52	55	64
2.	11	6	7	7	10	5	8	8	11	9	7	4
3.	5	5	4	6	7	8	2	3	8	6	1	5
4.	2	1	4	3	4	3	2	1	5	2	1	2
5.	0	0	2	3	2	2	0	1	1	1	1	2
-	5	3	1	1	5	4	1	0	2	2	4	2

109. Minister, priest, or rabbi.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Not helping.	98	105	27	23	24	28	29	28	18	26
2. Helping, but only to a small degree.	18	21	4	7	4	6	5	4	5	4
3. Helping somewhat.	16	10	6	4	4	2	2	1	4	3
4. Helping a lot.	1	11	0	2	0	3	1	4	0	2
5. Helping very much.	3	3	2	0	1	2	0	1	0	0
- No response	3	1	0	0	2	0	0	1	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	66	72	32	33	69	72	29	33	44	50	54	55
2.	11	14	7	7	9	13	9	8	12	11	6	10
3.	11	4	5	6	12	6	4	4	8	3	8	7
4.	1	3	0	8	0	9	1	2	1	6	0	5
5.	2	0	1	3	1	2	2	1	3	1	0	2
-	2	1	1	0	3	1	0	0	2	1	1	0

110. Private guidance counselors, not part of your school.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Not helping.	112	122	33	31	27	30	33	31	19	30
2. Helping, but only to a small degree.	6	10	0	2	3	2	1	2	2	4
3. Helping somewhat.	7	6	1	0	0	5	2	0	4	1
4. Helping a lot.	4	5	2	1	2	1	0	3	0	0
5. Helping very much.	2	3	1	0	0	2	0	1	1	0
- No response	8	5	2	2	3	1	1	2	2	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	74	80	38	42	78	85	34	37	57	56	55	66
2.	4	5	2	5	3	5	3	5	3	7	3	3
3.	4	2	3	4	5	4	2	2	4	1	3	5
4.	3	2	1	3	2	3	2	2	3	2	1	3
5.	1	1	1	2	0	2	2	1	1	3	1	0
-	7	4	1	1	6	4	2	1	2	3	6	2

111. Other students.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Not helping.	68	62	18	12	18	17	18	18	14	15
2. Helping, but only to a small degree.	30	39	8	10	9	10	7	8	6	11
3. Helping somewhat.	30	31	11	9	4	8	10	8	5	6
4. Helping a lot.	8	16	1	3	4	6	2	5	1	2
5. Helping very much.	1	3	0	2	0	0	0	0	1	1
- No response	2	0	1	0	0	0	0	0	1	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	40	39	28	23	44	39	24	23	37	32	31	30
2.	23	28	7	11	23	28	7	11	15	22	15	17
3.	22	16	8	15	19	22	11	9	13	12	17	19
4.	5	8	3	8	6	11	2	5	3	6	5	10
5.	1	3	0	0	0	3	1	0	1	0	0	3
-	2	0	0	0	2	0	0	0	1	0	1	0

High school students differ greatly in the amount of time, thought, and effort they give to <u>planning for the future</u>. Use the statements below to compare yourself to the typical student in your grade and sex on each of the following kinds of plans. The five possible statements are to be used with items 112 through 123.

112. Planning my career in general.

Compared to my group I am:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. much below average.	2	5	1	2	0	1	0	0	1	2
2. somewhat below average.	11	16	1	5	3	2	6	8	1	1
3. average.	70	73	17	19	20	20	20	18	13	16
4. somewhat above average.	46	45	18	6	9	15	9	10	10	14
5. much above average.	8	11	2	3	2	3	1	3	3	2
- No response	2	1	0	1	1	0	1	0	0	0

112. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	0	1	2	4	1	2	1	3	2	4	0	1
2.	6	12	5	4	7	8	4	8	4	9	7	7
3.	46	43	24	30	42	46	28	27	41	33	29	40
4.	35	30	11	15	36	37	10	8	19	19	27	26
5.	6	7	2	4	6	9	2	2	4	6	4	5
-	0	1	2	0	2	1	0	0	0	1	2	0

113. Choosing high school courses.

Compared to my group I am:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. much below average.	2	1	1	0	0	0	0	0	1	1
2. somewhat below average.	3	12	0	3	2	4	0	3	1	2
3. average.	71	66	17	14	20	20	19	19	15	13
4. somewhat above average.	51	56	21	14	7	12	15	12	8	18
5. much above average.	9	14	0	3	4	5	2	5	3	1
- No response	3	2	0	2	2	0	1	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	0	1	2	0	1	0	1	1	1	1	1	0
2.	1	7	2	5	0	8	3	4	1	4	2	8
3.	52	37	19	29	44	36	27	30	34	32	37	34
4.	34	40	17	16	40	45	11	11	29	27	22	29
5.	5	8	4	6	6	13	3	1	4	6	5	8
-	1	1	2	1	3	1	0	1	1	2	2	0

114. Choosing high school activities.

Compared to my group I am:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. much below average.	12	10	3	1	3	2	4	4	2	3
2. somewhat below average.	19	23	2	4	5	4	6	10	6	5
3. average.	68	73	21	19	17	22	17	17	13	15
4. somewhat above average.	29	29	12	8	6	10	9	4	2	7
5. much above average.	7	14	0	2	2	3	0	4	5	5
- No response	4	2	1	2	2	0	1	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	6	6	6	4	7	2	5	8	6	5	6	5
2.	12	16	7	7	16	13	3	10	10	11	9	12
3.	50	44	18	29	42	48	26	25	28	35	40	38
4.	18	17	11	12	21	25	8	4	22	14	7	15
5.	6	10	1	4	6	13	1	1	3	6	4	8
-	1	1	3	1	2	2	2	0	1	1	3	1

115. Choosing out-of-school activities.

Compared to my group I am:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. much below average.	10	7	1	1	4	1	2	3	3	2
2. somewhat below average.	18	20	2	6	6	5	6	4	4	5
3. average.	58	51	21	13	11	15	12	13	14	10
4. somewhat above average.	38	45	14	10	8	12	13	12	3	11
5. much above average.	13	26	1	4	5	8	3	7	4	7
- No response	2	2	0	2	1	0	1	0	0	0

115. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	6	5	4	2	6	2	4	5	5	1	5	6
2.	13	11	5	9	12	12	6	8	9	10	9	10
3.	40	35	18	16	43	36	15	15	24	28	34	23
4.	25	27	13	18	26	33	12	12	26	20	12	25
5.	9	14	4	12	5	18	8	8	6	12	7	14
-	0	2	2	0	2	2	0	0	0	1	2	1

116. Choosing between college, junior college, business school, technical school, work, military service, marriage and homemaking, etc.

	Total		9th		10th		11th		12th	
Compared to my group I am:	E	C	E	C	E	C	E	C	E	C
1. much below average.	9	3	1	1	4	0	2	1	2	1
2. somewhat below average.	8	21	3	5	3	5	2	8	0	3
3. average.	50	53	12	13	11	15	17	12	10	13
4. somewhat above average.	52	48	18	10	12	13	11	13	11	12
5. much above average.	18	24	5	6	4	8	4	5	5	5
- No response	2	2	0	1	1	0	1	0	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	5	1	4	2	7	0	2	3	6	2	3	1
2.	6	12	2	9	3	12	5	9	3	12	5	9
3.	34	35	16	18	30	35	20	18	28	25	22	28
4.	35	30	17	18	37	33	15	15	25	21	27	27
5.	13	15	5	9	15	21	3	3	8	10	10	14
-	0	1	2	1	2	2	0	0	0	2	2	0

117. Choosing a particular college, branch of the service, mate, etc., among those that interest me.

	Total		9th		10th		11th		12th	
Compared to my group I am:	E	C	E	C	E	C	E	C	E	C
1. much below average.	10	7	4	2	1	3	4	1	1	1
2. somewhat below average.	17	17	4	4	3	5	7	5	3	3
3. average.	52	60	13	17	17	15	13	14	9	14
4. somewhat above average.	44	46	13	10	10	13	9	12	12	11
5. much above average.	14	17	5	1	3	5	3	6	3	5
- No response	2	4	0	2	1	0	1	1	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	5	3	5	4	5	1	5	6	8	6	2	1
2.	11	11	6	6	10	9	7	8	6	7	11	10
3.	39	35	13	25	31	41	21	19	27	27	25	33
4.	27	33	17	13	35	35	9	11	22	21	22	25
5.	11	10	3	7	11	13	3	4	7	10	7	7
-	0	2	2	2	2	4	0	0	0	1	2	3

118. Understanding my abilities, interests, personality, etc.

	Total		9th		10th		11th		12th	
Compared to my group I am:	E	C	E	C	E	C	E	C	E	C
1. much below average.	3	1	2	0	1	1	0	0	0	0
2. somewhat below average.	14	11	4	3	4	3	5	4	1	1
3. average.	42	60	8	13	9	16	16	15	9	16
4. somewhat above average.	60	55	24	15	16	15	7	12	13	13
5. much above average.	18	21	1	3	4	6	8	8	5	4
- No response	2	3	0	2	1	0	1	0	0	1

118. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	1	1	0	1	0	2	1	2	0	1	1
2.	10	8	4	3	7	5	7	6	6	5	8	6
3.	30	32	12	28	27	41	15	19	21	28	21	32
4.	42	40	18	15	41	40	19	15	31	28	29	27
5.	9	10	9	11	16	14	2	7	10	9	8	12
-	0	3	2	0	2	3	0	0	0	2	2	1

119. Choosing an occupation for which to prepare or in which to seek a job on finishing school.

Compared to my group I am:
1. much below average.
2. somewhat below average.
3. average.
4. somewhat above average.
5. much above average.
- No response

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1.	5	1	2	0	2	0	1	0	0	1
2.	11	26	2	8	3	7	4	10	2	1
3.	60	56	17	12	15	16	17	13	11	15
4.	51	51	17	13	11	14	12	11	11	13
5.	10	15	1	2	3	4	2	5	4	4
-	2	2	0	1	1	0	1	0	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	4	0	1	1	2	0	3	1	4	0	1	1
2.	9	19	2	7	6	14	5	12	4	12	7	14
3.	37	34	23	22	40	41	20	15	32	26	28	30
4.	38	30	13	21	37	36	14	15	25	23	26	28
5.	5	9	5	6	7	10	3	5	5	9	5	6
-	0	2	2	0	2	2	0	0	0	2	2	0

120. Planning for the next few days or weeks.

Compared to my group I am:
1. much below average.
2. somewhat below average.
3. average.
4. somewhat above average.
5. much above average.
- No response

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1.	6	5	3	3	3	2	0	0	0	0
2.	13	21	2	8	8	4	2	4	1	5
3.	65	65	22	13	11	21	18	22	14	9
4.	39	39	10	8	9	8	13	9	7	14
5.	14	19	2	2	3	6	3	4	6	7
-	2	2	0	2	1	0	1	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	3	2	3	3	3	1	3	4	4	2	2	3
2.	10	11	3	10	9	14	4	7	8	11	5	10
3.	44	45	21	20	45	44	20	21	31	29	34	36
4.	27	25	12	14	24	28	15	11	20	20	19	19
5.	9	9	5	10	11	14	3	5	7	9	7	10
-	0	2	2	0	2	2	0	0	0	1	2	1

121. Planning for a few months ahead.

Compared to my group I am:
1. much below average.
2. somewhat below average.
3. average.
4. somewhat above average.
5. much above average.
- No response

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1.	8	8	2	2	4	2	2	3	0	1
2.	16	22	1	7	8	7	5	5	2	3
3.	58	76	21	18	12	22	14	22	11	14
4.	45	29	14	6	8	5	12	7	11	11
5.	10	15	1	2	2	5	3	2	4	6
-	2	1	0	1	1	0	1	0	0	0

121. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	5	3	3	5	3	3	5	5	5	2	3	6
2.	10	10	6	12	12	13	4	9	8	14	8	8
3.	41	50	17	26	39	54	19	22	27	30	31	46
4.	31	20	14	9	30	21	15	8	24	15	21	14
5.	6	10	4	5	8	11	2	4	6	10	4	5
-	0	1	2	0	2	1	0	0	0	1	2	0

122. Planning for a year or so ahead.

Compared to my group I am:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. much below average.	13	10	3	4	5	2	4	3	1	1
2. somewhat below average.	12	25	3	5	6	5	1	9	2	6
3. average.	62	60	19	11	14	17	20	17	9	15
4. somewhat above average.	44	32	14	6	9	13	9	7	12	6
5. much above average.	6	22	0	8	0	4	2	3	4	7
- No response	2	2	0	2	1	0	1	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	7	4	6	6	7	4	6	6	7	4	6	6
2.	6	13	6	12	6	16	6	9	6	13	6	12
3.	45	39	17	21	45	40	17	20	29	23	33	37
4.	32	22	12	10	30	26	14	6	25	19	19	13
5.	3	14	3	8	4	15	2	7	3	12	3	10
-	0	2	2	0	2	2	0	0	0	1	2	1

123. Planning for two or more years ahead.

Compared to my group I am:	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. much below average.	15	17	4	4	6	2	3	5	2	6
2. somewhat below average.	17	24	4	5	4	8	7	8	2	3
3. average.	58	50	18	10	12	11	17	15	11	14
4. somewhat above average.	38	30	13	4	9	13	9	6	7	7
5. much above average.	9	28	0	11	3	7	0	5	6	5
- No response	2	2	0	2	1	0	1	0	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	9	6	6	11	7	12	8	5	9	11	6	6
2.	10	16	7	8	14	13	3	11	7	12	10	12
3.	43	32	15	18	44	35	14	15	28	20	30	30
4.	26	23	12	7	23	25	15	5	21	12	17	18
5.	5	15	4	13	4	16	5	12	5	16	4	12
-	0	2	2	0	2	2	0	0	0	1	2	1

In thinking about careers, about further education and about eventual occupations, people differ greatly both in <u>how</u> they seek information, and <u>how much</u> they use the various kinds of sources of information. <u>Compare</u> yourself with the typical student of your grade and sex on your use of each of the following kinds of information sources. Use the following answers to compare yourself for items 124 through 130.

124. Reading about careers and occupations.

Compared to my group, I have done:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. very little.	19	13	7	5	7	3	3	5	2	0
2. somewhat less than average.	20	28	3	5	7	8	7	9	3	6
3. as much as the average.	60	62	17	14	11	16	20	15	12	17
4. somewhat more than average.	32	40	9	10	7	11	6	9	10	10
5. a great deal more than average.	8	6	3	2	3	2	1	1	1	1
- No response	0	2	0	0	0	1	0	0	0	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	10	7	9	6	12	3	7	10	10	7	9	6
2.	10	17	10	11	16	15	4	13	9	15	11	13
3.	45	39	15	23	40	43	20	19	29	28	31	34
4.	24	26	8	14	21	35	11	5	17	18	15	22
5.	4	3	4	3	5	5	3	1	5	3	3	3
-	0	2	0	0	0	2	0	0	0	1	0	1

125. Attending lectures, discussions on jobs.

Compared to my group, I have done:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. very little.	44	38	11	10	16	8	10	12	7	8
2. somewhat less than average.	31	38	9	10	5	9	11	10	6	9
3. as much as the average.	46	57	14	12	8	20	11	11	13	14
4. somewhat more than average.	15	13	4	3	6	3	4	5	1	2
5. a great deal more than average.	3	2	1	1	0	0	1	1	1	0
- No response	0	3	0	0	0	1	0	0	0	2

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	25	24	19	14	29	21	15	17	23	18	21	20
2.	23	20	8	18	21	25	10	13	17	18	14	20
3.	29	37	17	20	35	42	11	15	16	29	30	28
4.	13	8	2	5	8	10	7	3	11	5	4	8
5.	3	2	0	0	1	2	2	0	3	1	0	1
-	0	3	0	0	0	3	0	0	0	1	0	2

126. Looking at texts and manuals to get an idea of what a field is like.

Compared to my group, I have done:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. very little.	20	10	4	2	8	2	3	5	5	1
2. somewhat less than average.	27	24	8	4	6	9	10	6	3	5
3. as much as the average.	49	61	17	17	10	15	13	16	9	13
4. somewhat more than average.	32	41	7	10	7	10	10	7	8	14
5. a great deal more than average.	11	13	3	3	4	4	1	5	3	1
- No response	0	2	0	0	0	1	0	0	0	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	15	7	5	3	15	7	5	3	10	8	10	2
2.	18	17	9	7	17	13	10	11	17	8	10	16
3.	29	39	20	22	34	41	15	20	24	36	25	25
4.	24	24	8	17	23	30	9	11	14	14	18	27
5.	7	5	4	8	5	10	6	3	5	5	6	8
-	0	2	0	0	0	2	0	0	0	1	0	1

127. Reading about people who made good in some occupation to learn more about it.

Compared to my group, I have done:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. very little.	32	15	10	3	11	4	5	4	6	4
2. somewhat less than average.	23	42	7	10	7	8	6	14	3	10
3. as much as the average.	55	52	11	14	10	15	21	12	13	11
4. somewhat more than average.	23	25	9	7	6	9	5	2	3	7
5. a great deal more than average.	6	15	2	2	1	4	0	7	3	2
- No response	0	2	0	0	0	1	0	0	0	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	24	12	8	3	20	9	12	6	20	8	12	7
2.	12	22	11	20	17	26	6	16	10	21	13	21
3.	37	37	18	15	39	35	16	17	25	24	30	28
4.	15	15	8	10	15	20	8	5	14	13	9	12
5.	5	6	1	9	3	11	3	4	1	5	5	10
-	0	2	0	0	0	2	0	0	0	1	0	1

128. Visiting an office, factory, shop, or other work place to see the work.

Compared to my group, I have done:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. very little.	42	20	13	3	15	3	8	10	6	4
2. somewhat less than average.	25	32	5	11	7	9	7	4	6	8
3. as much as the average.	44	57	12	14	7	15	15	17	10	11
4. somewhat more than average.	18	24	6	4	4	10	5	2	3	8
5. a great deal more than average.	10	16	3	4	2	3	2	6	3	3
- No response	0	2	0	0	0	1	0	0	0	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	24	15	18	5	29	14	13	6	22	10	20	10
2.	15	17	10	15	16	21	9	11	16	13	9	19
3.	35	36	9	21	33	39	11	18	19	31	25	26
4.	12	12	6	12	11	16	7	8	7	12	11	12
5.	7	12	3	4	5	11	5	5	6	5	4	11
-	0	2	0	0	0	2	0	0	0	1	0	1

129. Talking seriously with parents or relatives about possibilities or plans.

Compared to my group, I have done:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. very little.	14	9	5	2	4	4	3	2	2	1
2. somewhat less than average.	16	14	5	2	5	1	4	6	2	5
3. as much as the average.	41	43	10	13	10	11	13	11	8	8
4. somewhat more than average.	47	57	13	14	13	14	14	13	7	16
5. a great deal more than average.	21	26	6	5	3	10	3	7	9	4
- No response	0	2	0	0	0	1	0	0	0	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	7	5	7	4	7	7	7	2	6	6	8	3
2.	11	8	5	6	10	6	6	8	12	5	4	9
3.	26	23	15	20	31	23	10	20	17	21	24	22
4.	35	40	12	17	30	44	17	13	27	28	20	29
5.	14	16	7	10	16	21	5	5	8	11	13	15
-	0	2	0	0	0	2	0	0	0	1	0	1

130. Talking seriously with other students about career possibilities or plans.

Compared to my group, I have done:	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. very little.	30	15	12	2	7	6	8	6	3	1
2. somewhat less than average.	21	26	6	7	8	4	3	7	4	8
3. as much as the average.	60	68	12	15	14	17	23	19	11	17
4. somewhat more than average.	17	27	5	9	5	8	3	3	4	7
5. a great deal more than average.	11	13	4	3	1	5	0	4	6	1
- No response	0	2	0	0	0	1	0	0	0	1

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	20	10	10	5	18	10	12	5	15	9	15	6
2.	11	14	10	12	16	12	5	14	13	13	8	13
3.	40	43	20	25	42	49	18	19	29	32	31	36
4.	12	18	5	9	11	18	6	9	9	13	8	14
5.	10	7	1	6	7	12	4	1	4	4	7	9
-	0	2	0	0	0	2	0	0	0	1	0	1

Please read the following questions carefully. Unlike the questions you have just finished, most of these must be answered in your own words.

131. When you think about how you could earn your living after leaving school or college, what occupations are in your list of possibilities? Write their names in order of importance to you.

A. My most likely future occupation.

ECES Field[1]	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Service.	13	12	5	4	1	3	5	2	2	3
2. Business contact.	1	4	0	2	1	0	0	0	0	2
3. Business organization.	12	27	1	4	2	5	5	11	4	7
4. Technology.	26	21	12	5	4	6	6	6	4	4
5. Outdoor.	1	1	0	1	1	0	0	0	0	0
6. Science.	36	22	11	7	10	3	5	6	10	6
7. General culture.	26	27	5	4	7	10	8	7	6	6
8. Arts, entertainment and recreation.	8	21	2	4	3	10	3	4	0	3
9. Other.	5	7	0	2	2	2	1	1	2	2
- No response	11	9	3	3	4	2	4	2	0	2

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	9	7	4	5	10	8	3	4	4	4	9	8
2.	1	1	0	3	0	3	1	1	1	1	0	3
3.	9	17	3	10	7	11	5	16	4	8	8	19
4.	15	12	11	9	15	14	11	7	22	18	4	3
5.	1	1	0	0	1	0	0	1	0	1	1	0
6.	23	14	13	8	30	18	6	4	15	13	21	9
7.	19	20	7	7	20	24	6	3	12	10	14	17
8.	3	12	5	9	2	15	6	6	1	8	7	13
9.	3	2	2	5	3	5	2	2	3	3	2	4
-	10	8	1	1	6	5	5	4	8	6	3	3

[1]See An Experimental Educational and Career Exploration System, Reference Guide, International Busines Machines Corp., Advanced Development Division, Yorktown Heights, N.Y., 1969.

131. (cont.)

ECES Level	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Four-year college.	89	81	28	20	18	23	22	19	21	19
2. Two-year college.	17	18	6	3	3	5	6	7	2	3
3. Voc'l or special training sch.	15	32	2	6	7	9	3	9	3	8
4. On-the-job training.	2	3	0	1	1	0	1	1	0	1
- No response	11	10	3	4	4	2	4	2	0	2

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	60	58	29	23	72	68	17	13	43	46	46	35
2.	11	10	6	8	7	14	10	4	10	7	7	11
3.	8	14	7	18	5	9	10	23	5	8	10	24
4.	1	2	1	1	1	2	1	1	1	2	1	1
-	10	8	1	2	6	5	5	5	8	6	3	4

Holland VPI Category	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Realistic.	28	28	12	7	6	7	8	9	2	5
2. Intellectual.	38	22	14	8	8	4	5	6	11	4
3. Social.	30	27	6	7	7	7	10	5	7	8
4. Conventional.	8	19	1	1	2	4	2	8	3	6
5. Enterprising.	11	19	1	4	3	6	4	5	3	4
6. Artistic.	7	19	2	3	2	9	3	3	0	4
7. Other.	2	4	0	1	0	2	1	1	1	0
8. "	2	1	0	0	2	0	0	0	0	1
9. "	2	2	0	1	1	0	0	0	1	1
- No response	11	10	3	4	4	2	4	2	0	2

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	18	13	10	15	16	15	12	13	23	21	5	7
2.	24	16	14	6	31	20	7	2	20	14	18	8
3.	20	16	10	11	24	22	6	5	6	5	24	22
4.	6	11	2	8	3	8	5	11	2	2	6	17
5.	8	15	3	4	9	14	2	5	7	12	4	7
6.	3	12	4	7	1	14	6	5	1	9	6	10
7.	2	1	0	3	2	3	0	1	0	0	2	4
8.	1	0	1	1	2	1	0	0	1	1	1	0
9.	1	1	1	1	0	1	2	1	2	2	0	0
-	10	9	1	1	6	5	5	5	8	6	3	4

B. My next most likely choice (if you have one).

ECES Field	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Service.	10	13	3	1	3	3	3	3	1	6
2. Business contact.	0	4	0	0	0	1	0	2	0	1
3. Business organization.	11	16	1	1	2	6	6	5	2	4
4. Technology.	14	15	5	3	4	6	3	4	2	2
5. Outdoor.	3	2	1	0	0	0	1	1	1	1
6. Science.	16	18	5	7	5	5	0	1	6	5
7. General culture.	18	14	3	6	4	3	6	4	5	1
8. Art, entertainment and recreation.	10	18	4	3	2	8	2	4	2	3
9. Other.	3	4	1	0	1	2	1	2	0	0
- No response	54	47	16	15	14	7	15	13	9	12

131. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	4	9	6	4	7	12	3	1	1	2	9	11
2.	0	4	0	0	0	1	0	3	0	2	0	2
3.	5	9	6	7	7	8	4	8	4	4	7	12
4.	7	9	7	6	11	11	3	4	13	12	1	3
5.	3	2	0	0	1	1	2	1	2	2	1	0
6.	11	11	5	7	13	16	3	2	7	9	9	9
7.	14	10	4	4	17	10	1	4	6	9	12	5
8.	10	10	0	8	6	11	4	7	4	7	6	11
9.	2	3	1	1	1	2	2	2	3	2	0	2
-	37	27	17	20	31	31	23	16	30	23	24	24

ECES Level	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Four-year college.	55	59	15	15	13	19	13	12	14	13
2. Two-year college.	9	16	1	5	3	3	1	4	4	4
3. Voc'l or special training sch.	17	23	5	2	4	9	7	7	1	5
4. On-the-job training.	1	3	1	0	0	1	0	1	0	1
- No response	54	46	16	14	14	7	15	13	9	12

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	38	43	17	16	49	46	6	13	23	33	32	26
2.	5	9	4	7	4	12	5	4	6	7	3	9
3.	10	10	7	13	9	10	8	13	8	6	9	17
4.	1	2	0	1	0	2	1	1	0	1	1	2
-	37	27	17	19	31	31	23	15	30	23	24	23

Holland VPI Category	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Realistic.	16	21	6	4	3	5	5	7	2	5
2. Intellectual.	15	24	3	10	6	7	2	3	4	4
3. Social.	26	17	5	3	6	5	7	4	8	5
4. Conventional.	9	12	1	1	2	6	4	3	2	2
5. Enterprising.	7	14	3	2	2	3	1	4	1	5
6. Artistic.	7	12	2	1	1	6	2	3	2	2
7. Other.	0	2	0	0	0	1	0	1	0	0
8. "	2	0	2	0	0	0	0	0	0	0
9. "	2	2	0	0	1	1	1	1	0	0
- No response	55	47	17	15	14	7	15	13	9	12

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	11	13	5	8	8	15	8	6	13	14	3	7
2.	10	17	5	7	13	20	2	4	10	15	5	9
3.	17	10	9	7	23	14	3	3	3	3	23	14
4.	3	7	6	5	6	6	3	6	3	3	6	9
5.	5	9	2	5	7	7	0	7	4	6	3	8
6.	7	8	0	4	4	8	3	4	3	6	4	6
7.	0	2	0	0	0	1	0	1	0	0	0	2
8.	0	0	2	0	2	0	0	0	1	0	1	0
9.	2	1	0	1	0	1	2	1	2	2	0	0
-	38	27	17	20	31	31	24	16	31	23	24	24

132. When you think about the possibility of attending college (4 years or 2 years) or vocational training school after high school, what major areas or types of training do you think of? Write them in order of importance to you.

<u>If 4 or 2 Year College</u> or <u>If Vocational or Other Special School</u>:

A. My most likely college major or my most likely vocational training major.

Major Level	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Four-year college.	94	96	29	23	21	29	24	24	20	20
2. Two-year college.	10	10	2	2	3	1	3	4	2	3
3. Voc'l or special training sch.	14	24	2	2	5	6	3	6	4	10
4. On-the-job training.	0	1	0	1	0	0	0	0	0	0
- No response	21	20	6	8	6	5	7	5	2	2

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	63	66	31	30	77	78	17	18	43	51	51	45
2.	6	5	4	5	3	7	7	3	8	6	2	4
3.	10	9	4	15	4	14	10	10	6	7	8	17
4.	0	1	0	0	0	0	0	1	0	1	0	0
-	14	13	7	7	10	4	11	16	13	7	8	13

Major Field	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Service.	4	6	1	2	1	0	1	3	1	1
2. Business contact.	1	5	0	0	1	1	0	2	0	2
3. Business organization.	10	22	2	0	3	6	2	10	3	6
4. Technology.	15	13	6	2	2	3	6	3	1	5
5. Outdoor.	0	0	0	0	0	0	0	0	0	0
6. Science.	44	36	17	13	12	9	4	6	11	8
7. General culture.	38	36	4	8	9	12	15	8	10	8
8. Art, entertainment and recreation.	6	13	3	3	1	5	2	2	0	3
9. Other.	0	0	0	0	0	0	0	0	0	0
- No response	21	20	6	8	6	5	7	5	2	2

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	3	4	1	2	4	6	0	0	2	2	2	4
2.	1	4	0	1	0	3	1	2	1	2	0	3
3.	5	8	5	14	3	14	7	8	4	5	6	17
4.	10	7	5	6	7	9	8	4	15	11	0	2
5.	0	0	0	0	0	0	0	0	0	0	0	0
6.	30	23	14	13	37	28	7	8	21	19	23	17
7.	25	26	13	10	32	29	6	7	11	18	27	18
8.	5	9	1	4	1	10	5	3	3	8	3	5
9.	0	0	0	0	0	0	0	0	0	0	0	0
-	14	13	7	7	10	4	11	16	13	7	8	13

Holland VPI Category	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Realistic.	20	17	8	2	3	4	6	5	3	6
2. Intellectual.	38	35	17	13	9	9	6	8	6	5
3. Social.	31	19	2	5	8	5	9	4	12	5
4. Conventional.	4	20	0	1	3	6	1	7	0	6
5. Enterprising.	11	15	2	2	3	1	2	7	4	5
6. Artistic.	13	26	4	6	2	11	6	3	1	6
- No response	22	19	6	7	7	5	7	5	2	2

132. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	14	8	6	9	8	11	12	6	19	13	1	4
2.	27	24	11	11	34	30	4	5	21	23	17	12
3.	17	14	14	5	25	12	6	7	7	2	24	17
4.	1	8	3	12	1	13	3	7	0	5	4	15
5.	8	9	3	6	9	13	2	2	8	7	3	8
6.	11	19	2	7	6	20	7	6	2	15	11	11
-	15	12	7	7	11	4	11	15	13	7	9	12

B. My next most likely college major or vocational training major.

	Total		9th		10th		11th		12th	
Major Level	E	C	E	C	E	C	E	C	E	C
1. Four-year college.	80	82	22	19	17	28	22	19	19	16
2. Two-year college.	3	4	0	2	0	1	1	0	2	1
3. Voc'l or special training sch.	5	14	1	3	2	4	1	4	1	3
4. On-the-job training.	0	0	0	0	0	0	0	0	0	0
- No response	51	51	16	12	16	8	13	16	6	15

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	55	56	25	26	67	68	13	14	38	41	42	41
2.	0	2	3	2	2	2	1	2	2	4	1	0
3.	2	10	3	4	2	8	3	6	2	4	3	10
4.	0	0	0	0	0	0	0	0	0	0	0	0
-	36	26	15	25	23	25	28	26	28	23	23	28

	Total		9th		10th		11th		12th	
Major Field	E	C	E	C	E	C	E	C	E	C
1. Service.	5	1	1	1	1	0	2	0	1	0
2. Business contact.	1	1	0	0	1	0	0	1	0	0
3. Business organization.	8	13	2	1	2	5	2	3	2	4
4. Technology.	5	6	2	2	1	4	1	0	1	0
5. Outdoor.	1	0	0	0	0	0	1	0	0	0
6. Science.	32	38	10	12	6	7	8	10	8	9
7. General culture.	34	36	6	7	8	16	10	7	10	6
8. Art, entertainment and recreation.	2	4	2	0	0	1	0	2	0	1
9. Other.	0	0	0	0	0	0	0	0	0	0
- No response	51	52	16	13	16	8	13	16	6	15

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	1	3	0	4	1	1	0	2	1	3	0
2.	0	0	1	1	0	1	1	0	0	0	1	1
3.	4	9	4	4	6	6	2	7	5	3	3	10
4.	2	4	3	2	2	3	3	3	5	6	0	0
5.	1	0	0	0	1	0	0	0	1	0	0	0
6.	23	29	9	9	27	36	5	2	17	16	15	22
7.	23	22	11	14	29	27	5	9	11	21	23	15
8.	2	2	0	2	2	4	0	0	1	2	1	2
9.	0	0	0	0	0	0	0	0	0	0	0	0
-	36	27	15	25	23	25	28	27	28	23	23	29

132. (cont.)

Holland VPI Category	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Realistic.	8	11	2	3	1	5	3	1	2	2
2. Intellectual.	22	28	9	11	5	5	6	8	2	4
3. Social.	26	20	3	4	7	5	8	3	8	8
4. Conventional.	6	8	2	0	2	6	1	1	1	1
5. Enterprising.	9	15	1	4	2	5	2	4	4	2
6. Artistic.	16	19	5	3	2	7	4	7	5	2
- No response	51	50	16	11	16	8	13	15	6	16

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	4	6	4	5	5	5	3	6	8	8	0	3
2.	19	24	3	4	18	24	4	4	14	15	8	13
3.	12	13	14	7	20	18	6	2	7	8	20	12
4.	3	5	3	3	5	5	1	3	4	0	2	8
5.	3	9	6	6	8	11	1	4	6	11	3	4
6.	16	11	0	8	14	15	2	4	4	7	12	12
-	36	26	15	24	23	25	28	25	28	23	23	27

133. When you first started seeing counselors regularly, about future plans, do you think that this was the right time for you?

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Too early.	12	13	5	5	3	4	2	3	2	1
2. About right.	76	84	22	21	23	21	23	19	8	23
3. Too late.	40	42	6	6	6	10	10	15	18	11
- No response	11	12	6	4	3	6	2	2	0	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	9	8	3	5	7	8	5	5	9	8	3	5
2.	50	52	26	32	46	55	30	29	38	41	38	43
3.	27	24	13	18	32	31	8	11	18	18	22	24
-	7	10	4	2	9	9	2	3	5	5	6	7

134. When do you think would be the best time for most students to start seeing a counselor about their future plans?

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
5	1	0	0	0	1	0	0	0	0	0
6	3	2	2	0	0	2	1	0	0	0
7	16	11	4	7	5	2	4	1	3	1
8	17	20	8	6	3	6	4	4	2	4
9	57	63	16	12	16	17	14	15	11	19
10	24	26	5	4	6	7	7	9	6	6
11	10	16	2	2	1	3	3	6	4	5
12	0	0	0	0	0	0	0	0	0	0
-	2	3	0	2	0	1	1	0	1	0

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
5	1	0	0	0	1	0	0	0	1	0	0	0
6	2	1	1	1	2	0	1	2	3	0	0	2
7	13	7	3	4	14	9	2	2	6	5	10	6
8	12	13	5	7	9	13	8	7	11	8	6	12

134. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
9	39	37	18	26	38	47	19	16	22	30	35	33
10	16	16	8	10	17	18	7	8	14	11	10	15
11	6	11	4	5	5	8	5	8	4	8	6	8
12	0	0	0	0	0	0	0	0	0	0	0	0
-	2	1	0	2	0	1	2	2	2	3	0	0

135. What emphasis should there be on career and educational guidance in your school?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. The same as now.	34	35	6	4	11	9	9	10	8	12
2. More emphasis.	79	83	25	23	17	22	20	20	17	18
3. Less emphasis.	1	3	0	2	0	1	0	0	1	0
4. I don't know.	25	26	8	5	7	9	8	7	2	5
- No response	0	4	0	2	0	0	0	2	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	20	18	14	17	20	22	14	13	19	15	15	20
2.	63	54	16	29	59	66	20	17	34	40	45	43
3.	0	1	1	2	1	0	0	3	0	2	1	1
4.	10	19	15	7	14	15	11	11	17	13	8	13
-	0	2	0	2	0	0	0	4	0	2	0	2

136. Please consider how much help you <u>are</u> getting from your counselors on the following issues. Then, rank the issues in the order that shows which issues you <u>are</u> receiving the most help for.

High School Course Selection	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	63	66	14	19	18	18	22	19	9	10
2. Second rank.	34	46	13	9	8	13	7	12	6	12
3. Third rank.	24	18	6	1	8	3	2	5	8	9
4. Fourth rank.	7	6	2	2	0	3	3	0	2	1
5. Fifth rank.	8	8	2	2	1	3	2	3	3	0
- No response	3	7	2	3	0	1	1	0	0	3

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	45	47	18	19	44	50	19	16	32	36	31	30
2.	25	26	9	20	22	31	12	15	17	19	17	27
3.	13	8	11	10	15	8	9	10	13	6	11	12
4.	4	3	3	3	5	5	2	1	3	3	4	3
5.	6	5	2	3	6	4	2	4	3	5	5	3
-	0	5	3	2	2	5	1	2	2	3	1	4

Finding a Job	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	11	15	5	3	2	4	4	2	0	6
2. Second rank.	16	9	3	3	4	1	4	3	5	2
3. Third rank.	20	29	5	7	4	10	9	8	2	4
4. Fourth rank.	41	41	11	8	7	9	13	13	10	11
5. Fifth rank.	44	47	11	10	5	16	7	13	10	8
- No response	5	9	3	5	1	1	0	0	1	3

136. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	7	5	4	10	7	5	4	10	4	4	7	11
2.	9	4	7	5	6	7	10	2	12	5	4	4
3.	13	17	7	12	14	18	6	11	12	14	8	15
4.	32	25	9	16	33	30	8	11	19	20	22	21
5.	28	35	16	12	27	36	17	11	20	24	24	23
-	3	7	2	2	5	7	0	2	3	4	2	5

Finding a College	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	27	27	1	3	5	2	7	8	14	14
2. Second rank.	18	22	2	3	8	7	4	7	4	5
3. Third rank.	41	46	12	12	7	12	16	13	6	9
4. Fourth rank.	23	27	11	7	3	9	6	7	3	4
5. Fifth rank.	23	21	9	6	10	10	3	4	1	1
- No response	6	8	4	5	2	1	0	0	0	2

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	19	17	8	10	18	19	9	8	9	10	18	17
2.	11	12	7	10	14	14	4	8	13	9	5	13
3.	30	30	11	16	32	33	9	13	19	27	22	19
4.	17	15	6	12	12	20	11	7	15	14	8	13
5.	13	14	10	7	12	11	11	10	10	8	13	13
-	2	6	4	2	6	6	0	2	3	4	3	4

Performance in School Now	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	25	26	9	10	11	9	2	3	3	4
2. Second rank.	61	59	10	15	15	18	23	15	13	11
3. Third rank.	23	33	8	3	3	6	6	13	6	11
4. Fourth rank.	19	18	6	3	3	5	5	3	5	7
5. Fifth rank.	9	8	4	1	3	2	1	5	1	0
- No response	2	7	2	4	0	1	0	0	0	2

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	18	14	7	12	13	19	12	7	15	15	10	11
2.	45	44	16	15	45	42	16	17	32	30	29	29
3.	12	18	11	15	17	22	6	11	12	12	11	21
4.	12	8	7	10	12	11	7	7	8	10	11	8
5.	6	5	3	3	5	4	4	4	2	2	7	6
-	0	5	2	2	2	5	0	2	1	3	1	4

Personal Problems	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	10	10	3	1	2	5	1	2	4	2
2. Second rank.	8	10	2	2	5	4	0	2	1	2
3. Third rank.	18	20	6	8	4	7	5	2	3	3
4. Fourth rank.	26	23	8	5	6	5	8	7	4	6
5. Fifth rank.	71	77	17	14	17	19	22	25	15	19
- No response	6	10	3	6	1	1	1	0	1	3

136. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	7	4	3	6	8	6	2	4	6	5	4	5
2.	6	5	2	5	5	3	3	7	6	4	2	6
3.	12	9	6	11	9	16	9	4	7	10	11	10
4.	14	18	12	5	16	17	10	6	17	12	9	11
5.	50	50	21	27	50	53	21	24	30	36	41	41
-	4	7	2	3	6	8	0	2	4	4	2	6

137. Now, consider the same issues in terms of where you would <u>like</u> to have the most help from your counselors.

High School Course Selection	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	56	56	20	19	18	18	10	9	8	10
2. Second rank.	30	45	10	8	5	11	10	16	5	10
3. Third rank.	24	27	3	3	6	9	10	9	5	6
4. Fourth rank.	14	8	3	1	4	2	3	1	4	4
5. Fifth rank.	15	9	3	2	2	0	4	4	6	3
- No response	0	5	0	2	0	1	0	0	0	2

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	37	37	19	19	37	36	19	20	27	28	29	28
2.	22	33	8	12	18	35	12	10	20	22	10	23
3.	14	15	10	12	18	19	6	8	9	10	15	17
4.	12	4	2	4	11	5	3	3	7	4	7	4
5.	8	3	7	6	10	6	5	3	7	5	8	4
-	0	1	0	4	0	2	0	3	0	3	0	2

Finding a Job	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	24	41	8	8	5	14	7	13	4	6
2. Second rank.	29	25	6	5	10	5	7	8	6	7
3. Third rank.	28	22	10	3	4	9	9	3	5	7
4. Fourth rank.	35	27	7	8	8	4	12	7	8	8
5. Fifth rank.	21	28	7	9	8	7	2	7	4	3
- No response	2	6	1	3	0	1	0	1	1	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	14	20	10	21	13	25	11	16	13	16	11	25
2.	18	15	11	10	20	17	9	8	9	12	20	13
3.	22	14	6	8	16	15	12	7	18	10	10	12
4.	22	20	13	7	30	22	5	5	19	15	16	12
5.	15	22	6	6	13	20	8	8	10	15	11	13
-	2	1	0	5	2	3	0	3	1	3	1	3

Finding a College	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	53	61	10	9	14	13	14	20	15	19
2. Second rank.	32	27	9	4	10	10	8	4	5	9
3. Third rank.	33	30	11	13	8	9	9	7	5	1
4. Fourth rank.	12	18	6	4	2	6	4	6	0	2
5. Fifth rank.	7	10	2	4	1	2	1	1	3	3
- No response	1	5	1	2	0	1	0	1	0	1

137. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	29	34	24	27	35	47	18	14	24	28	29	33
2.	22	18	10	9	23	18	9	9	12	17	20	10
3.	23	21	10	9	23	21	10	9	22	13	11	17
4.	11	11	1	7	7	11	5	7	7	7	5	11
5.	6	8	1	2	5	4	2	6	4	4	3	6
-	1	2	0	3	1	2	0	3	0	3	1	2

Performance in School Now	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	27	33	7	10	10	10	7	6	3	7
2. Second rank.	35	36	11	13	10	12	6	5	8	6
3. Third rank.	29	37	8	6	6	7	6	13	9	11
4. Fourth rank.	36	27	10	2	6	8	14	10	6	7
5. Fifth rank.	12	13	3	3	3	3	4	5	2	2
- No response	0	5	0	2	0	1	0	0	0	2

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	16	22	11	11	15	21	12	12	12	13	15	20
2.	23	21	12	15	25	27	10	9	22	16	13	20
3.	20	25	9	12	21	27	8	10	11	21	18	16
4.	25	18	11	9	26	17	10	10	17	13	19	14
5.	9	7	3	6	7	9	5	4	8	6	4	7
-	0	1	0	4	0	2	0	3	0	3	0	2

Personal Problems	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. First rank.	16	16	8	2	2	6	1	2	5	6
2. Second rank.	14	17	4	7	3	5	6	4	1	1
3. Third rank.	17	15	6	4	7	4	3	3	1	4
4. Fourth rank.	21	27	6	8	8	7	2	5	5	7
5. Fifth rank.	66	68	13	11	15	17	25	24	13	16
- No response	4	6	2	4	0	1	0	0	2	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	12	9	4	7	10	10	6	6	6	6	10	10
2.	6	10	8	7	8	10	6	7	10	6	4	11
3.	13	9	4	6	14	8	3	7	12	6	5	9
4.	16	20	5	7	9	22	12	5	11	14	10	13
5.	42	43	24	25	49	49	17	19	29	35	37	33
-	3	1	1	5	3	3	1	3	2	3	2	3

138. Which of the following groups of subjects do you like the best?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Mathematics - such as arithmetic, algebra, geometry, and general math.	17	15	7	5	2	3	3	6	5	1
2. English - such as reading, speech, literature, rhetoric.	18	19	1	2	7	9	10	5	0	3
3. Social Studies - such as geography, history, and civics.	14	11	1	2	3	2	5	4	5	3

138. (cont.)

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
4. Sciences - such as chemistry, physics, and biology.	33	26	15	9	9	5	3	5	6	7
5. Foreign Languages - such as French, Spanish, and German.	6	3	1	1	3	0	0	0	2	2
6. Industrial Arts - homemaking, shop, mechanical drawing.	14	11	4	0	2	3	5	4	3	4
7. Music - such as band, chorus.	5	11	1	2	1	4	2	2	1	3
8. Art - drawing and crafts.	5	11	2	4	2	5	1	1	0	1
9. Physical Education.	9	10	2	3	0	0	5	3	2	4
10. Business Education.	3	15	0	2	2	5	1	6	0	2
11. All of the above.	1	2	1	1	0	0	0	0	0	1
12. None of the above.	2	3	1	1	0	1	0	1	1	0
- No response	11	13	3	3	3	4	2	2	3	4

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	9	8	8	7	10	10	7	5	8	8	9	7
2.	14	16	4	3	13	13	5	6	6	6	12	13
3.	8	6	6	5	13	9	1	2	8	7	6	4
4.	25	19	8	7	27	20	6	6	18	16	15	10
5.	4	2	2	1	4	2	2	1	0	0	6	3
6.	9	7	5	4	4	6	10	5	10	6	4	5
7.	2	6	3	5	3	8	2	3	3	7	2	4
8.	5	7	0	4	2	8	3	3	2	6	3	5
9.	2	5	7	5	7	6	2	4	5	6	4	4
10.	3	6	0	9	0	6	3	9	0	2	3	13
11.	0	1	1	1	1	2	0	0	1	2	0	0
12.	2	2	0	1	0	2	2	1	2	2	0	1
-	9	8	2	5	9	11	2	2	6	4	5	9

139. Which of the following groups of subjects do you like the least?

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Mathematics - such as arithmetic, algebra, geometry, and general math.	36	33	4	4	10	9	11	13	11	7
2. English - such as reading, speech, literature, rhetoric.	7	7	2	3	1	0	2	2	2	2
3. Social Studies - such as geography, history, and civics.	12	11	5	2	2	4	3	3	2	2
4. Sciences - such as chemistry, physics, and biology.	10	11	2	1	1	4	4	2	3	4
5. Foreign Languages - such as French, Spanish, and German.	37	34	12	12	13	11	9	6	3	5
6. Industrial Arts - homemaking, shop, mechanical drawing.	2	2	1	0	0	1	1	1	0	0
7. Music - such as band, chorus.	8	4	7	1	0	1	1	1	0	1
8. Art - drawing and crafts.	5	6	0	1	3	2	2	2	0	1
9. Physical Education.	10	13	2	5	1	5	4	2	3	1
10. Business Education.	4	7	2	2	1	1	0	1	1	3
11. All of the above.	0	2	0	1	0	0	0	1	0	0
12. None of the above.	5	12	1	1	2	2	0	4	2	5
- No response	2	9	1	3	0	1	0	1	1	4

139. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	20	18	16	15	26	18	10	15	16	14	20	19
2.	4	5	3	2	3	6	4	1	4	4	3	3
3.	7	7	5	4	7	7	5	4	3	2	9	9
4.	6	4	4	7	7	7	3	4	3	4	7	7
5.	29	22	8	12	26	23	11	11	26	20	11	14
6.	2	2	0	0	0	2	2	0	2	2	0	0
7.	5	3	3	1	6	2	2	2	8	2	0	2
8.	2	5	3	1	4	5	1	1	1	5	4	1
9.	8	7	2	6	7	8	3	5	3	5	7	8
10.	3	5	1	2	4	7	0	0	1	4	3	3
11.	0	2	0	0	0	1	0	1	0	2	0	0
12.	4	8	1	4	1	9	4	3	2	6	3	6
-	2	6	0	3	2	8	0	1	0	2	2	7

For items 140 and 141, if several answers apply to you, list them in their order of importance to you.

140. Why do you like the subject you chose for question 138?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I like the teacher.	9	10	1	4	5	0	0	3	3	3
2. I find it interesting and stimulating.	52	58	15	9	14	16	16	18	7	15
3. It is an easy subject.	3	3	0	0	1	1	1	1	1	1
4. I like the other students in the class.	1	1	1	1	0	0	0	0	0	0
5. I will need it in later life.	10	6	4	0	3	2	2	1	1	3
6. I am good in this subject.	16	21	4	7	5	5	4	3	3	6
7. For some other reason.	4	8	1	3	0	4	2	1	1	0
- No response	44	44	13	12	7	13	12	12	12	7

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	6	4	3	6	5	4	4	6	3	5	6	5
2.	30	39	22	19	39	41	13	17	25	27	27	31
3.	2	1	1	2	0	2	3	1	3	1	0	2
4.	1	0	0	1	0	1	1	0	1	1	0	0
5.	7	3	3	3	3	3	7	3	8	2	2	4
6.	8	11	8	10	11	15	5	6	12	12	4	9
7.	2	3	2	5	1	7	3	1	1	2	3	6
-	37	33	7	11	35	30	9	14	17	22	27	22

141. Why do you dislike the subject you chose for question 139?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I dislike the teacher.	4	13	1	6	1	4	0	1	2	2
2. It is hard for me.	33	32	9	4	9	7	10	11	5	10
3. It requires too much homework.	3	1	0	0	1	0	1	0	1	1
4. I don't like some of the other students in the class.	0	1	0	1	0	0	0	0	0	0
5. I can't see how it will ever be of any use to me.	14	6	3	1	2	2	7	1	2	2

141. (cont.)

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
6. It's boring.	19	19	9	7	5	4	3	2	2	6
7. I just don't like it.	26	29	6	7	6	8	7	8	7	6
- No response	35	40	11	8	6	11	9	14	9	7

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	3	8	1	5	2	9	2	4	2	3	2	10
2.	20	18	13	14	21	16	12	16	13	15	20	17
3.	1	0	2	1	1	1	2	0	3	1	0	0
4.	0	0	0	1	0	0	0	1	0	1	0	0
5.	11	4	3	2	8	5	6	1	11	4	3	2
6.	13	10	6	9	13	16	6	3	14	12	5	7
7.	15	15	11	14	17	17	9	12	11	10	15	19
	28	32	7	8	29	30	6	10	15	18	20	22

As you go through school and to college, to work, etc., how do you see the decisions about alternatives open to you being made? Use the following statements to answer questions 142 through 148.

142. The decisions will be made somehow or other.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. True.	70	71	18	20	16	17	23	15	13	19
2. Uncertain.	28	32	12	4	6	10	7	14	3	4
3. False.	39	44	9	11	11	13	7	9	12	11
- No response	2	4	0	1	2	1	0	1	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	42	42	28	29	44	50	26	21	37	40	33	31
2.	24	17	4	15	18	15	10	17	14	16	14	16
3.	25	33	14	11	30	36	9	8	18	15	21	29
-	2	2	0	2	2	2	0	2	1	1	1	3

143. The school will tell me what I should do.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. True.	18	16	9	6	4	6	3	3	2	1
2. Uncertain.	39	38	15	10	8	8	12	13	4	7
3. False.	81	94	15	19	23	27	22	22	21	26
- No response	1	3	0	1	0	0	0	1	1	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	8	5	10	11	11	9	7	7	13	5	5	11
2.	23	29	16	9	26	25	13	13	21	24	18	14
3.	61	58	20	36	56	68	25	26	36	42	45	52
-	1	2	0	1	1	1	0	2	0	1	1	2

144. My parents will know what I should do.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. True.	43	31	15	10	8	6	12	7	8	8
2. Uncertain.	45	62	18	14	10	18	12	20	5	10
3. False.	50	56	6	12	17	17	12	11	15	16
- No response	1	2	0	0	0	0	1	1	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	28	19	15	12	26	23	17	8	23	12	20	19
2.	30	38	15	24	33	41	12	21	24	38	21	24
3.	35	36	15	20	35	38	15	18	23	21	27	35
-	0	1	1	1	0	1	1	1	0	1	1	1

145. There is usually an experienced person to advise me.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. True.	76	85	24	22	18	22	21	19	13	22
2. Uncertain.	49	37	12	11	13	11	13	10	11	5
3. False.	14	27	3	3	4	8	3	9	4	7
- No response	0	2	0	0	0	0	0	1	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	48	53	28	32	49	60	27	25	40	37	36	48
2.	35	24	14	13	35	21	14	16	24	20	25	17
3.	10	16	4	11	10	21	4	6	6	14	8	13
-	0	1	0	1	0	1	0	1	0	1	0	1

146. Experience will show me what to do next.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. True.	52	72	15	17	16	16	12	19	9	20
2. Uncertain.	63	63	15	15	13	20	19	17	16	11
3. False.	23	13	9	4	5	4	6	2	3	3
- No response	1	3	0	0	1	1	0	1	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	34	42	18	30	32	49	20	23	32	31	20	41
2.	43	42	20	21	46	44	17	19	24	36	39	27
3.	16	9	7	4	16	8	7	5	13	4	10	9
-	0	1	1	2	0	2	1	1	1	1	0	2

147. I will know enough about things to decide.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. True.	49	62	10	16	13	19	16	11	10	16
2. Uncertain.	69	62	20	12	18	17	19	19	12	14
3. False.	19	25	8	8	3	5	2	8	6	4
- No response	2	2	1	0	1	0	0	1	0	1

147. (cont.)

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	36	37	13	25	31	43	18	19	28	26	21	36
2.	49	43	20	19	51	41	18	21	30	34	39	28
3.	7	13	12	12	12	18	7	7	10	11	9	14
-	1	1	1	1	0	1	2	1	2	1	0	1

148. I will be able to get help in thinking things through.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. True.	97	97	26	25	26	23	25	24	20	25
2. Uncertain.	34	45	10	10	7	15	10	11	7	9
3. False.	8	7	3	1	2	3	2	3	1	0
- No response	0	2	0	0	0	0	0	1	0	1

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	65	58	32	39	67	71	30	26	45	44	52	53
2.	24	30	10	15	25	27	9	18	20	24	14	21
3.	4	5	4	2	2	4	6	3	5	3	3	4
-	0	1	0	1	0	1	0	1	0	1	0	1

149. Which of the following statements best describes how you plan to finance your education or training beyond high school?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I don't plan to continue my education or training beyond high school.	3	6	0	1	2	2	0	2	1	1
2. I don't know at this time how I will finance my education or training.	17	28	6	8	6	7	4	7	1	6
3. I will have to borrow or work for the money.	12	15	1	4	3	6	5	3	3	2
4. I will have to work or borrow for part of the money, with the remainder being provided by parents, scholarship, grant, savings, and/or trust fund.	51	59	16	16	11	18	15	16	9	9
5. All finances will be taken care of by parents, scholarships, grant, savings, and/or trust fund.	54	41	15	7	13	7	12	10	14	17
- No response	2	2	1	0	0	1	1	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	2	1	4	2	2	1	4	2	1	1	5
2.	11	14	6	14	4	13	13	15	8	15	9	13
3.	4	7	8	8	8	7	4	8	8	10	4	5
4.	36	41	15	18	39	47	12	12	32	29	19	30
5.	39	29	15	12	39	33	15	8	20	16	34	25
-	1	1	1	1	2	1	0	1	0	1	2	1

150. Where do you expect to go to school after high school?

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. I don't expect to go to school.	3	17	0	2	1	4	1	5	1	6
2. In my home town, or near enough so I can live at home.	23	14	3	1	4	3	9	6	7	4
3. In New Jersey, but away from home.	11	12	1	0	1	4	2	5	7	3
4. In an eastern state.	25	29	4	7	6	7	8	6	7	9
5. In a northern state.	13	13	3	4	6	3	2	2	2	4
6. In a western state.	13	10	5	4	3	4	3	0	2	2
7. In a southern state.	4	7	1	2	0	1	2	1	1	3
8. Outside the United States.	0	0	0	0	0	0	0	0	0	0
9. I don't know yet.	40	43	18	16	11	13	10	12	1	2
- No response	7	6	4	0	3	2	0	2	0	2

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	2	9	1	8	1	6	2	11	2	6	1	11
2.	17	7	6	7	11	8	12	6	8	3	15	11
3.	7	2	4	10	10	9	1	3	5	7	6	5
4.	17	24	8	5	23	25	2	4	9	17	16	12
5.	7	8	6	5	11	8	2	5	5	5	8	8
6.	10	5	3	5	10	6	3	4	10	5	3	5
7.	4	4	0	3	2	6	2	1	4	2	0	5
8.	0	0	0	0	0	0	0	0	0	0	0	0
9.	24	30	16	13	23	29	17	14	23	24	17	19
-	5	5	2	1	3	6	4	0	4	3	3	3

These questionnaires have attempted to get a clear picture of your awareness about the worlds of work and education, the method by which you are preparing for your future, some ideas about what direction you feel your future may take, and a feeling for how you look at your environment in general.

151. Using the answers below, please indicate to what extent you feel these questionnaires have managed to get a clear, and accurate picture of you and your situation.

	Total		9th		10th		11th		12th	
	E	C	E	C	E	C	E	C	E	C
1. Hardly at all.	6	6	1	0	1	1	3	3	1	2
2. Only a small extent.	11	17	2	4	2	3	4	5	3	5
3. Somewhat.	38	45	12	8	8	14	10	11	8	12
4. A pretty good picture.	73	68	23	20	19	20	16	16	15	12
5. A very good picture.	9	13	1	4	3	3	4	3	1	3
- No response	1	1	0	0	1	0	0	1	0	0

	White		Black		Coll.		N-Coll.		Male		Female	
	E	C	E	C	E	C	E	C	E	C	E	C
1.	5	4	1	2	4	3	2	3	3	4	3	2
2.	6	9	5	8	9	10	2	7	6	6	5	11
3.	22	30	16	15	23	34	15	11	17	25	21	20
4.	54	44	19	24	49	48	24	20	39	31	34	37
5.	5	5	4	8	8	7	1	6	4	6	5	7
-	0	1	1	0	0	1	1	0	0	0	1	1

152. Now, please indicate by marking an "X" on the scale below, just where you feel you do stand (compared to other students in your grade) when it comes to: understanding the world of work and education, planning for your future, and dealing with your environment in general.

For example, an "X" at 9 or 10 would mean you felt you were at the top of your class in relation to these matters. An "X" at 1 or 2 would mean you felt you were at the bottom of your class in relation to these matters.

1 2 3 4 5 6 7 8 9 10

Bottom — Lower Middle — Middle — Upper Middle — Top

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Bottom.	1	1	0	0	1	1	0	0	0	0
2. Lower middle.	12	16	1	3	5	2	4	7	2	4
3. Middle.	50	50	17	10	8	18	17	16	8	6
4. Upper middle.	60	55	17	15	18	15	11	10	14	15
5. Top.	11	20	2	6	2	4	4	4	3	6
- No response	5	9	2	2	1	1	1	2	1	4

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	1	0	0	1	1	1	0	0	1	1	0	0
2.	6	9	6	7	10	6	2	10	4	7	8	9
3.	32	29	18	21	29	31	21	19	25	20	25	30
4.	41	35	19	20	41	42	19	13	32	27	28	28
5.	9	17	2	3	10	18	1	2	7	13	4	7
-	4	4	1	5	3	5	2	4	1	4	4	5

153. Now, mark with an "O" on the same scale where you would like to stand.

	Total E	Total C	9th E	9th C	10th E	10th C	11th E	11th C	12th E	12th C
1. Bottom.	1	1	0	0	1	0	0	1	0	0
2. Lower middle.	0	1	0	0	0	1	0	0	0	0
3. Middle.	10	11	0	3	2	2	7	5	1	1
4. Upper middle.	30	27	7	5	10	10	10	5	3	7
5. Top.	90	99	31	23	18	24	19	27	22	25
- No response	8	12	1	5	4	4	1	1	2	2

	White E	White C	Black E	Black C	Coll. E	Coll. C	N-Coll. E	N-Coll. C	Male E	Male C	Female E	Female C
1.	1	0	0	1	1	0	0	1	1	1	0	0
2.	0	0	0	1	0	1	0	0	0	1	0	0
3.	6	9	4	2	6	4	4	7	4	5	6	6
4.	15	11	15	16	21	13	9	14	15	11	15	16
5.	66	69	24	30	63	79	27	20	47	48	43	51
-	5	5	3	7	3	6	5	6	3	6	5	6

Appendix B

FREQUENCY DISTRIBUTIONS OF STUDENT RESPONSES
TO POST-TEST STUDENT QUESTIONNAIRE, PART 3

1. What is your overall reaction to the Educational and Career Exploration System (ECES)?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I like it very much.	92	32	24	22	14	62	30	60	32	42	50
2. I like it somewhat.	40	7	10	11	12	28	12	28	12	25	15
3. I dislike it somewhat.	8	1	1	4	2	5	3	7	1	3	5
4. I dislike it very much.	0	0	0	0	0	0	0	0	0	0	0

2. Your school period was about 45 minutes long. Was 45 minutes about the right amount of time for you to use ECES at one sitting?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. 20 minutes or less would be better.	0	0	0	0	0	0	0	0	0	0	0
2. Between 20 and 45 minutes would be better.	9	2	4	1	2	6	3	7	2	3	6
3. 45 was about right.	44	8	13	12	11	36	8	26	18	19	25
4. Between 45 and 60 minutes would be better.	59	22	11	15	11	37	22	46	13	32	27
5. More than 60 minutes would be better.	28	8	7	9	4	16	12	16	12	16	12

3. You were scheduled to use the system one period each week. If the system were available all year long, how often would you like to be scheduled to use the system?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Several times a week.	65	28	9	20	8	40	25	37	28	39	26
2. About once a week.	63	9	21	14	19	45	18	50	13	25	38
3. About once a month.	7	3	3	1	0	6	1	4	3	4	3
4. Only a few times a year.	4	0	2	2	0	3	1	4	0	1	3
- No response	1	0	0	0	1	1	0	0	1	1	0

*4. Which of the following schedules for using ECES would you prefer?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Several times spread out over the whole year.	47	14	13	10	10	36	11	30	17	17	30
2. Several times but all during a single month.	27	5	8	10	4	16	11	20	7	16	11
3. Several times but all during a single week.	33	11	8	9	5	19	14	17	16	22	11
4. Other (please explain).	28	8	6	7	7	21	7	25	3	13	15
- No response	2	1	0	1	0	1	1	2	0	0	2

Now, consider your whole four years of high school. About how many periods each year do you think would be best for you to use ECES?

5. 9th Grade.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. 0 - periods	3	0	2	1	0	2	1	2	1	2	1
2. 1 - 3 periods	32	10	7	7	8	16	16	21	11	15	17
3. 4 - 6 periods	27	5	6	10	6	22	5	20	7	11	16
4. 7 - 9 periods	18	6	5	5	2	17	1	11	7	9	9
5. 10 or more periods	60	19	15	14	12	38	22	41	19	33	27

6. 10th Grade.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. 0 - periods	0	0	0	0	0	0	0	0	0	0	0
2. 1 - 3 periods	19	8	7	3	1	9	10	11	8	9	10
3. 4 - 6 periods	28	4	5	10	9	20	8	20	8	12	16
4. 7 - 9 periods	40	9	9	14	8	29	11	27	13	18	22
5. 10 or more periods	50	17	13	10	10	36	14	35	15	28	22
- No response	3	2	1	0	0	1	2	2	1	3	0

7. 11th Grade.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. 0 - periods	0	0	0	0	0	0	0	0	0	0	0
2. 1 - 3 periods	11	3	5	1	2	6	5	7	4	6	5
3. 4 - 6 periods	22	9	4	6	3	12	10	9	13	10	12
4. 7 - 9 periods	30	5	8	9	8	23	7	19	11	12	18
5. 10 or more periods	74	21	17	21	15	53	21	58	16	39	35
- No response	3	2	1	0	0	1	2	2	1	3	0

8. 12th Grade.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. 0 - periods	3	1	0	2	0	2	1	0	3	2	1
2. 1 - 3 periods	26	6	8	8	4	16	10	13	13	8	18
3. 4 - 6 periods	15	6	4	3	2	10	5	9	6	7	8
4. 7 - 9 periods	22	2	7	7	6	14	8	14	8	13	9
5. 10 or more periods	71	23	15	17	16	52	19	57	14	37	34
- No response	3	2	1	0	0	1	2	2	1	3	0

*9. Do you think most students could benefit from ECES?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Definitely not.	2	1	0	1	0	2	0	1	1	1	1
2. Probably not.	9	3	2	2	2	6	3	7	2	4	5
3. Probably could.	49	9	13	18	9	33	16	36	13	32	17
4. Definitely could.	76	24	19	16	17	52	24	48	28	29	47
- No response	3	2	1	0	0	1	2	2	1	3	0

10. In <u>what grade</u> do you feel that it would be best for a student to begin sessions with ECES?

	Total	9	10	11	12	W	B	C	N-C	M	F
5	4	1	0	3	0	4	0	2	2	3	1
6	1	1	0	0	0	1	0	0	1	1	0
7	11	4	5	1	1	7	4	7	4	7	4
8	35	13	10	7	5	19	16	20	15	15	20
9	60	17	14	17	12	43	17	44	16	27	33
10	18	2	4	6	6	14	4	13	5	8	10
11	6	0	1	2	3	4	2	6	0	5	1
12	0	0	0	0	0	0	0	0	0	0	0
No response	4	2	1	1	0	2	2	3	1	3	1

11. ECES is most suitable for:

	Total	9	10	11	12	W	B	C	N-C	M	F
1. those who are going directly to work.	3	2	0	0	1	3	0	2	1	2	1
2. those who will take some "after school training".	10	3	1	3	3	4	6	6	4	5	5
3. those who are going to 2 or 4 year colleges.	19	5	7	6	1	14	5	12	7	13	6

11. (cont.)

	Total	9	10	11	12	W	B	C	N-C	M	F
4. all of the above.	101	28	26	24	23	70	31	71	30	46	55
5. none of the above.	4	0	0	4	0	3	1	2	2	1	3
- No response	3	2	1	0	0	1	2	2	1	3	0

12. What was the reaction of other students who used ECES?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. They disliked it very much.	1	0	0	0	1	1	0	0	1	1	0
2. They disliked it some.	7	1	1	3	2	3	4	7	0	3	4
3. They liked it some.	76	16	19	25	16	48	28	50	26	41	35
4. They liked it very much.	53	23	14	7	9	43	10	35	18	24	29
- No response	3	0	1	2	0	0	3	3	0	1	2

13. Omitted.

14. If there were a charge or fee for ECES, would you recommend its use?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Definitely not.	22	6	4	6	6	14	8	13	9	13	9
2. Probably not.	33	4	10	11	8	23	10	24	9	20	13
3. Probably would.	65	20	16	18	11	44	21	45	20	26	39
4. Definitely would.	20	10	5	2	3	14	6	13	7	11	9

15. Do you believe parents would be willing to pay a reasonable fee if a system like ECES were available?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Definitely not.	8	3	3	1	1	7	1	4	4	6	2
2. Probably not.	21	3	8	7	3	14	7	16	5	11	10
3. Probably would.	90	23	21	24	22	62	28	65	25	42	48
4. Definitely would.	19	10	3	4	2	12	7	10	9	11	8
- No response	2	1	0	1	0	0	2	0	2	0	2

16. How would you describe yourself, in relation to your career plans for the future, before you started using ECES?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I hadn't thought much about my future plans.	14	7	4	2	1	13	1	6	8	9	5
2. I was really uncertain about my future plans.	26	7	7	6	6	19	7	16	10	12	14
3. I was somewhat uncertain about my future plans.	49	19	13	10	7	30	19	35	14	29	20
4. I was rather definite about my future plans.	40	7	9	16	8	24	16	30	10	16	24
5. I was very definite about my future plans.	11	0	2	3	6	9	2	8	3	4	7

17. Do you feel that you have changed any of your career plans for the future as a result of using ECES?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Definitely not.	27	2	8	7	10	17	10	18	9	14	13
2. Probably not.	24	10	4	5	5	13	11	21	3	10	14
3. Not sure at this time.	29	6	7	13	3	21	8	20	9	15	14
4. Probably have.	40	14	11	8	7	26	14	23	17	23	17
5. Definitely have.	20	8	5	4	3	18	2	13	7	8	12

18. How would you describe yourself, in relation to your career plans for the future, now that you've used ECES?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I haven't thought much about my future plans.	4	1	1	1	1	1	3	4	0	3	1
2. I am really uncertain about my future plans.	6	1	2	2	1	6	0	4	2	3	3
3. I am somewhat uncertain about my future plans.	35	12	10	9	4	24	11	24	11	22	13
4. I am rather definite about my future plans.	76	23	19	21	13	49	27	52	24	36	40
5. I am very definite about my future plans.	19	3	3	4	9	15	4	11	8	6	13

19. Do you feel that you will change any of your career plans for the future as a result of using ECES?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Definitely not.	25	2	6	8	9	18	7	15	10	11	14
2. Probably not.	33	15	8	5	5	22	11	27	6	12	21
3. Not sure at this time.	42	11	11	13	7	28	14	28	14	29	13
4. Probably will.	32	11	8	9	4	22	10	23	9	15	17
5. Definitely will.	5	1	1	1	2	4	1	1	4	2	3
6. I would like to change but I don't think I can. (Please explain.)	2	0	1	0	1	1	1	1	1	0	2
- No response	1	0	0	1	0	0	1	0	1	1	0

20. How has ECES affected your plans for the future?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I am much more confused than when I started.	1	0	0	1	0	0	1	0	1	0	1
2. I am somewhat more confused than when I started.	10	1	5	4	0	8	2	7	3	5	5
3. I am about the same as when I started.	37	8	3	12	14	25	12	26	11	19	18
4. I am somewhat more definite than when I started.	63	20	19	16	8	39	24	43	20	35	28
5. I am much more definite than when I started.	29	11	8	4	6	23	6	19	10	11	18

21. How has ECES affected the number of alternatives you were considering for your future?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I have a great many more alternatives now than before.	20	4	1	8	7	13	7	13	7	11	9
2. I have a few more alternatives now than before.	51	15	15	17	4	35	16	37	14	22	29
3. I have as many alternatives now as before.	34	10	8	5	11	18	16	22	12	21	13
4. I have fewer alternatives now than before.	20	5	5	6	4	18	2	15	5	7	13
5. I have far fewer alternatives now than before.	12	4	6	1	1	8	4	6	6	6	6
- No response	3	2	0	0	1	3	0	2	1	3	0

22. About how many new occupations did you explore on ECES that you previously knew little or nothing about?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. None	12	5	3	2	2	7	5	10	2	6	6
2. 1 - 3	58	15	12	16	15	38	20	39	19	29	29
3. 4 - 6	35	6	14	10	5	26	9	22	13	17	18
4. 7 - 9	20	7	3	7	3	13	7	15	5	11	9
5. 10 or more	15	7	3	2	3	11	4	9	6	7	8

23. Omitted.

24. About how many new majors did you explore on ECES that you previously knew little or nothing about?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. None	43	11	10	12	10	24	19	32	11	22	21
2. 1 - 3	52	14	10	18	10	39	13	37	15	24	28
3. 4 - 6	25	7	10	4	4	17	8	18	7	13	12
4. 7 - 9	4	2	0	1	1	4	0	1	3	1	3
5. 10 or more	12	5	4	2	1	8	4	6	6	7	5
- No response	4	1	1	0	2	3	1	1	3	3	1

25. Omitted.

26. Did you learn something from ECES about <u>factors</u> that are important to consider when making decisions about what to do after high school?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Nothing at all.	21	4	7	6	4	13	8	17	4	9	12
2. Only a little.	56	13	10	18	15	36	20	42	14	27	29
3. Quite a lot.	43	14	13	11	5	33	10	28	15	23	20
4. A great deal.	19	9	5	1	4	13	6	7	12	11	8
- No response	1	0	0	1	0	0	1	1	0	0	1

Use the five answers below for items 27 through 32 to indicate <u>how helpful</u> each of the following people was in helping you to understand ECES printouts, and what they might mean in terms of your plans and goals.

27. Parent, parents, or guardian.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I didn't go to this person.	50	12	17	10	11	34	16	32	18	25	25
2. No help at all.	22	4	3	10	5	18	4	15	7	13	9
3. Some help.	49	16	11	14	8	33	16	37	12	24	25
4. Quite a lot of help.	14	4	4	3	3	6	8	10	4	6	8
5. A great deal of help.	4	3	0	0	1	3	1	1	3	2	2
- No response	1	1	0	0	0	1	0	0	1	0	1

28. Brothers, sisters, relatives.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I didn't go to this person.	85	27	24	22	12	58	27	64	21	42	43
2. No help at all.	25	7	3	8	7	17	8	15	10	13	12
3. Some help.	21	4	5	5	7	15	6	13	8	9	12
4. Quite a lot of help.	5	0	2	1	2	3	2	2	3	3	2
5. A great deal of help.	4	2	1	1	0	2	2	1	3	3	1

29. The ECES monitors.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I didn't go to this person.	20	7	8	4	1	17	3	13	7	11	9
2. No help at all.	5	0	1	0	4	3	2	4	1	3	2
3. Some help.	43	14	10	10	9	35	8	26	17	23	20
4. Quite a lot of help.	36	10	8	12	6	23	13	32	4	15	21
5. A great deal of help.	35	9	8	10	8	16	19	20	15	17	18
- No response	1	0	0	1	0	1	0	0	1	1	0

30. School counselors.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I didn't go to this person.	92	32	21	24	15	68	24	69	23	44	48
2. No help at all.	8	2	2	1	3	3	5	5	3	5	3
3. Some help.	26	4	7	9	6	16	10	16	10	14	12
4. Quite a lot of help.	6	0	2	1	3	3	3	2	4	1	5
5. A great deal of help.	8	2	3	2	1	5	3	3	5	6	2

31. Teachers.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I didn't go to this person.	106	33	27	28	18	74	32	77	29	52	54
2. No help at all.	13	5	2	3	3	7	6	9	4	9	4
3. Some help.	15	1	4	3	7	10	5	7	8	6	9
4. Quite a lot of help.	3	0	1	2	0	2	1	1	2	2	1
5. A great deal of help.	3	1	1	1	0	2	1	1	2	1	2

32. Other students.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I didn't go to this person.	79	20	25	19	15	53	26	53	26	40	39
2. No help at all.	23	7	3	9	4	15	8	17	6	10	13
3. Some help.	35	11	7	8	9	25	10	24	11	19	16
4. Quite a lot of help.	2	1	0	1	0	1	1	1	1	1	1
5. A great deal of help.	1	1	0	0	0	1	0	0	1	0	1

33. Omitted.

34. Omitted.

35. About how many times did you talk with your counselor about your ECES printouts?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Not at all.	106	31	26	28	21	74	32	75	31	46	60
2. Once.	14	4	4	4	2	7	7	11	3	10	4
3. Twice.	11	0	4	4	3	9	2	5	6	7	4
4. Three times.	4	2	1	0	1	2	2	3	1	4	0
5. Four or more times.	5	3	0	1	1	3	2	1	4	3	2

36. Do you feel that because of using ECES you would profit more from talks with your counselor?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Definitely not.	18	3	4	7	4	11	7	13	5	10	8
2. Probably not.	24	7	4	7	6	18	6	21	3	9	15
3. Probably would.	75	20	22	18	15	50	25	47	28	40	35
4. Definitely would.	23	10	5	5	3	16	7	14	9	11	12

*37. When ECES suggested you talk with your counselor, which did you do?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I did not try to see my counselor.	36	8	6	11	11	26	10	27	9	17	19
2. I considered the suggestion but did nothing.	49	18	11	14	6	31	18	30	19	28	21
3. I tried to see my counselor but couldn't.	13	5	6	2	0	8	5	9	4	9	4
4. I saw my counselor.	15	1	4	4	6	10	5	8	7	8	7
5. I talked with someone else instead.	17	4	4	6	3	14	3	12	5	5	12
- No response	9	3	4	0	2	5	4	8	1	3	6

Now read the following items and choose the statement that describes your situation.

To what extent has ECES:

38. lived up to your expectations?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	6	0	4	0	2	3	3	3	3	5	1
2. To only some extent.	24	5	3	10	6	17	7	15	9	13	11
3. To an average extent.	27	6	7	7	7	16	11	20	7	15	12
4. To a pretty good extent.	39	10	12	11	6	25	14	25	14	20	19
5. To a great extent.	44	19	9	9	7	34	10	32	12	17	27

39. been helpful to you in the area of <u>educational</u> planning?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	12	1	0	6	5	8	4	12	0	5	7
2. To only some extent.	23	6	7	4	6	14	9	16	7	13	10
3. To an average extent.	28	7	6	8	7	21	7	19	9	14	14
4. To a pretty good extent.	50	16	13	14	7	34	16	32	18	22	28
5. To a great extent.	26	10	8	5	3	17	9	15	11	15	11
- No response	1	0	1	0	0	1	0	1	0	1	0

40. been helpful to you in the area of <u>occupational</u> planning?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	13	2	5	3	3	9	4	13	0	8	5
2. To only some extent.	17	3	3	7	4	12	5	10	7	9	8
3. To an average extent.	29	9	9	6	5	15	14	20	9	13	16
4. To a pretty good extent.	47	11	11	14	11	32	15	31	16	23	24
5. To a great extent.	34	15	7	7	5	27	7	21	13	17	17

41. been able to deal with your own individual situations and questions?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	27	4	6	11	6	20	7	21	6	14	13
2. To only some extent.	30	8	8	10	4	23	7	22	8	15	15
3. To an average extent.	40	16	9	7	8	24	16	25	15	22	18
4. To a pretty good extent.	28	8	7	7	6	19	9	20	8	11	17
5. To a great extent.	14	4	4	2	4	8	6	6	8	7	7
- No response	1	0	1	0	0	1	0	1	0	1	0

42. helped you find definite paths of action in reaching your goals?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	21	1	6	9	5	17	4	18	3	9	12
2. To only some extent.	31	10	6	8	7	22	9	26	5	19	12

42. (cont.)

	Total	9	10	11	12	W	B	C	N-C	M	F
3. To an average extent.	41	14	11	9	7	24	17	31	10	19	22
4. To a pretty good extent.	34	11	7	9	7	24	10	16	18	16	18
5. To a great extent.	13	4	5	2	2	8	5	4	9	7	6

43. helped you understand how your strengths and weaknesses fit in with your educational goals?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	8	1	2	4	1	4	4	7	1	3	5
2. To only some extent.	17	5	4	4	4	14	3	15	2	9	8
3. To an average extent.	36	11	9	11	5	22	14	24	12	21	15
4. To a pretty good extent.	38	13	11	8	6	27	11	28	10	20	18
5. To a great extent.	41	10	9	10	12	28	13	21	20	17	24

44. helped you understand how your strengths and weaknesses fit in with your occupational goals?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	9	0	3	4	2	5	4	7	2	4	5
2. To only some extent.	19	5	3	7	4	13	6	17	2	13	6
3. To an average extent.	26	10	5	5	6	19	7	16	10	14	12
4. To a pretty good extent.	45	16	14	9	6	29	16	33	12	22	23
5. To a great extent.	41	9	10	12	10	29	12	22	19	17	24

45. used ideas and words that had real meaning to you?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	17	4	5	3	5	11	6	14	3	11	6
2. To only some extent.	16	3	3	8	2	11	5	12	4	9	7
3. To an average extent.	47	15	13	11	8	27	20	29	18	27	20
4. To a pretty good extent.	36	11	7	12	6	29	7	23	13	14	22
5. To a great extent.	23	7	6	3	7	16	7	16	7	9	14
- No response	1	0	1	0	0	1	0	1	0	0	1

46. helped you find new information about your situation that helped you make decisions?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	13	0	5	3	5	9	4	9	4	8	5
2. To only some extent.	19	6	2	6	5	11	8	15	4	12	7
3. To an average extent.	40	12	10	10	8	27	13	29	11	17	23
4. To a pretty good extent.	37	12	11	9	5	27	10	25	12	19	18
5. To a great extent.	31	10	7	9	5	21	10	17	14	14	17

47. made you feel more aware of the possible educational alternatives you have?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	19	0	4	7	8	16	3	15	4	9	10
2. To only some extent.	15	7	1	4	3	9	6	13	2	6	9
3. To an average extent.	45	12	7	15	11	30	15	31	14	22	23
4. To a pretty good extent.	34	11	15	6	2	23	11	22	12	16	18
5. To a great extent.	27	10	8	5	4	17	10	14	13	17	10

*48. made you feel more aware of the possible occupational alternatives you have?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	12	0	4	3	5	8	4	10	2	7	5
2. To only some extent.	18	7	2	6	3	12	6	13	5	8	10
3. To an average extent.	27	7	6	7	7	19	8	20	7	12	15
4. To a pretty good extent.	43	13	13	11	6	26	17	27	16	24	19
5. To a great extent.	39	13	9	10	7	29	10	25	14	18	21

49. helped you become aware of the <u>important factors</u> on which to base your <u>educational</u> decisions?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	13	0	2	5	6	10	3	11	2	7	6
2. To only some extent.	26	10	6	5	5	16	10	20	6	11	15
3. To an average extent.	43	12	13	12	6	28	15	30	13	21	22
4. To a pretty good extent.	34	11	6	8	9	24	10	22	12	16	18
5. To a great extent.	22	7	6	7	2	15	7	11	11	13	9
- No response	2	0	2	0	0	2	0	1	1	2	0

50. helped you become aware of the <u>important factors</u> on which to base your <u>occupational</u> decisions?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	11	0	4	4	3	8	3	9	2	5	6
2. To only some extent.	21	7	5	5	4	15	6	18	3	12	9
3. To an average extent.	37	13	11	9	4	21	16	23	14	18	19
4. To a pretty good extent.	45	12	7	12	14	33	12	30	15	22	23
5. To a great extent.	25	8	7	7	3	17	8	15	10	12	13
- No response	1	0	1	0	0	1	0	0	1	1	0

51. helped you make better <u>educational</u> decisions?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	32	4	6	9	13	25	7	27	5	15	17
2. To only some extent.	21	7	2	8	4	13	8	13	8	13	8
3. To an average extent.	38	9	12	11	6	23	15	28	10	16	22
4. To a pretty good extent.	30	13	6	6	5	20	10	19	11	15	15
5. To a great extent.	17	7	7	3	0	12	5	7	10	9	8
- No response	2	0	2	0	0	2	0	1	1	2	0

52. helped you make better <u>occupational</u> decisions?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	21	1	5	6	9	13	8	17	4	11	10
2. To only some extent.	16	4	1	6	5	10	6	14	2	9	7
3. To an average extent.	37	10	11	12	4	27	10	25	12	15	22
4. To a pretty good extent.	32	13	6	8	5	22	10	21	11	18	14
5. To a great extent.	33	12	11	5	5	22	11	18	15	16	17
- No response	1	0	1	0	0	1	0	0	1	1	0

53. helped you become a more effective person in general?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	40	8	8	8	16	28	12	34	6	22	18
2. To only some extent.	16	7	4	4	1	9	7	11	5	6	10
3. To an average extent.	48	13	12	18	5	33	15	33	15	21	27
4. To a pretty good extent.	26	9	9	5	3	16	10	14	12	14	12
5. To a great extent.	9	3	1	2	3	8	1	3	6	6	3
- No response	1	0	1	0	0	1	0	0	1	1	0

54. dealt with problems that are important to you?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Hardly at all.	32	5	10	11	6	22	10	27	5	15	17
2. To only some extent.	35	12	4	11	8	24	11	23	12	18	17
3. To an average extent.	31	11	8	7	5	20	11	19	12	18	13
4. To a pretty good extent.	19	7	6	4	2	13	6	15	4	9	10
5. To a great extent.	20	4	5	4	7	13	7	9	11	7	13
- No response	3	1	2	0	0	3	0	2	1	3	0

55. Omitted.

56. Omitted.

57. Omitted.

Below are some things that are generally thought to be necessary in a guidance program. Please consider each one and decide whether it could be best handled by a counselor, ECES, or a combination of the two.

Helping you:

58. obtain information about high school courses.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	38	7	11	10	10	23	15	27	11	22	16
2. ECES.	28	14	4	5	5	19	9	15	13	13	15
3. The counselor and ECES.	50	12	16	11	11	32	18	34	16	22	28
4. Either the counselor or ECES could do it.	21	6	4	9	2	19	2	16	5	11	10
5. Some other source.	2	0	0	2	0	1	1	2	0	1	1
- No response	1	1	0	0	0	1	0	1	0	1	0

59. understand your interests better.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	30	9	8	8	5	18	12	20	10	17	13
2. ECES.	39	16	9	7	7	26	13	26	13	17	22
3. The counselor and ECES.	45	10	12	13	10	32	13	29	16	23	22
4. Either the counselor or ECES could do it.	13	2	4	4	3	8	5	9	4	7	6
5. Some other source.	12	3	2	4	3	10	2	10	2	6	6
- No response	1	0	0	1	0	1	0	1	0	0	1

60. understand your individual situation and needs better.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	67	19	17	19	12	51	16	46	21	32	35
2. ECES.	19	7	3	7	2	8	11	11	8	11	8
3. The counselor and ECES.	28	9	8	3	8	19	9	20	8	14	14
4. Either the counselor or ECES could do it.	10	1	3	4	2	6	4	7	3	3	7
5. Some other source.	15	4	3	4	4	11	4	10	5	10	5
- No response	1	0	1	0	0	0	1	1	0	0	1

61. consider summer experience in occupations you are thinking about.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	50	14	13	15	8	35	15	33	17	24	26
2. ECES.	21	7	4	5	5	13	8	15	6	11	10
3. The counselor and ECES.	33	10	7	9	7	22	11	21	12	18	15
4. Either the counselor or ECES could do it.	18	4	4	6	4	13	5	12	6	8	10
5. Some other source.	16	4	6	2	4	11	5	13	3	8	8
- No response	2	1	1	0	0	1	1	1	1	1	1

62. understand your abilities better.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	20	3	6	7	4	14	6	12	8	11	9
2. ECES.	44	19	9	5	11	30	14	29	15	20	24

62. (cont.)

	Total	9	10	11	12	W	B	C	N-C	M	F
3. The counselor and ECES.	47	14	15	12	6	30	17	33	14	29	18
4. Either the counselor or ECES could do it.	19	2	4	9	4	13	6	13	6	6	13
5. Some other source.	10	2	1	4	3	8	2	8	2	4	6

63. see connections between your high school experience and future plans.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	14	2	5	5	2	9	5	9	5	6	8
2. ECES.	45	15	6	10	14	28	17	28	17	23	22
3. The counselor and ECES.	50	17	16	11	6	35	15	36	14	26	24
4. Either the counselor or ECES could do it.	22	4	5	8	5	15	7	15	7	8	14
5. Some other source.	8	2	2	3	1	7	1	6	2	6	2
- No response	1	0	1	0	0	1	0	1	0	1	0

64. get useful facts about occupations.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	6	1	2	2	1	3	3	2	4	6	0
2. ECES.	84	27	16	22	19	61	23	58	26	39	45
3. The counselor and ECES.	38	11	14	8	5	24	14	26	12	20	18
4. Either the counselor or ECES could do it.	5	1	0	4	0	2	3	3	2	2	3
5. Some other source.	6	0	2	1	3	4	2	5	1	3	3
- No response	1	0	1	0	0	1	0	1	0	0	1

65. see connections between your interests and possible occupations.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	15	2	5	6	2	12	3	10	5	5	10
2. ECES.	64	18	17	15	14	43	21	42	22	33	31
3. The counselor and ECES.	45	15	10	11	9	30	15	31	14	25	20
4. Either the counselor or ECES could do it.	9	3	0	4	2	4	5	6	3	4	5
5. Some other source.	6	2	2	1	1	5	1	5	1	3	3
- No response	1	0	1	0	0	1	0	1	0	0	1

66. see connections between your abilities and possible occupations.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	16	1	5	7	3	9	7	12	4	7	9
2. ECES.	54	17	14	9	14	37	17	34	20	29	25
3. The counselor and ECES.	54	16	13	16	9	37	17	37	17	27	27
4. Either the counselor or ECES could do it.	10	4	1	3	2	6	4	7	3	5	5
5. Some other source.	4	2	1	1	0	4	0	3	1	2	2
- No response	2	0	1	1	0	2	0	2	0	0	2

67. think about your goals, plans, and decisions.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	30	5	7	9	9	20	10	18	12	16	14
2. ECES.	25	10	6	4	5	12	13	12	13	15	10
3. The counselor and ECES.	47	16	9	13	9	35	12	35	12	22	25
4. Either the counselor or ECES could do it.	19	6	5	6	2	13	6	15	4	8	11
5. Some other source.	16	3	6	4	3	13	3	12	4	9	7
- No response	3	0	2	1	0	2	1	3	0	0	3

68. obtain <u>useful</u> advice as to what you should do.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	45	11	13	12	9	27	18	31	14	25	20
2. ECES.	17	9	3	3	2	8	9	9	8	8	9
3. The counselor and ECES.	50	12	14	13	11	37	13	32	13	24	26
4. Either the counselor or ECES could do it.	10	3	0	6	1	8	2	7	3	5	5
5. Some other source.	15	5	3	2	5	12	3	13	2	6	9
- No response	3	0	2	1	0	3	0	3	0	2	1

69. discover new <u>educational</u> possibilities you might look into.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	12	3	4	3	2	7	5	6	6	7	5
2. ECES.	61	19	15	14	13	46	15	41	20	31	30
3. The counselor and ECES.	43	13	10	11	9	27	16	31	12	22	21
4. Either the counselor or ECES could do it.	20	5	5	7	3	12	8	14	6	7	13
5. Some other source.	2	0	1	1	0	1	1	2	0	1	1
- No response	2	0	0	1	1	2	0	1	1	2	0

70. discover new <u>occupational</u> possibilities you might look into.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	6	0	4	2	0	3	3	3	3	1	5
2. ECES.	77	24	19	19	15	53	24	52	25	40	37
3. The counselor and ECES.	40	12	8	11	9	26	14	27	13	22	18
4. Either the counselor or ECES could do it.	11	3	3	3	2	7	4	7	4	2	9
5. Some other source.	5	1	1	1	2	5	0	5	0	4	1
- No response	1	0	0	1	0	1	0	1	0	1	0

71. get information on colleges or training schools.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	15	3	5	2	5	9	6	9	6	10	5
2. ECES.	41	20	8	8	5	32	9	26	15	18	23
3. The counselor and ECES.	56	10	17	16	13	37	19	37	19	32	24
4. Either the counselor or ECES could do it.	22	6	3	8	5	13	9	18	4	7	15
5. Some other source.	5	1	2	2	0	3	2	4	1	2	3
- No response	1	0	0	1	0	1	0	1	0	1	0

72. make decisions about what to do after high school.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. The counselor.	36	7	8	8	13	27	9	27	9	22	14
2. ECES.	19	7	4	7	1	12	7	7	12	14	5
3. The counselor and ECES.	54	19	15	12	8	36	18	38	16	21	33
4. Either the counselor or ECES could do it.	10	4	2	4	0	7	3	8	2	4	6
5. Some other source.	16	3	2	5	6	10	6	11	5	5	11
- No response	5	0	4	1	0	3	2	4	1	4	1

73. Do you feel that there was a need for the ECES monitors (the men and women that helped you with the system and handed out the check lists)?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Not at all.	4	0	2	1	1	1	3	4	0	2	2
2. Some need.	30	11	6	8	5	23	7	17	13	14	16
3. Definitely a need.	106	29	27	28	22	71	35	74	32	54	52

74. Were you ever "lost" on the ECES system?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Yes, a lot.	12	5	4	0	3	7	5	6	6	5	7
2. Yes, a few times.	107	30	27	31	19	70	37	73	34	52	55
3. No.	21	5	4	6	6	18	3	16	5	13	8

75. How did you get out of difficulty?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. By myself.	13	7	2	2	2	10	3	10	3	8	5
2. Another student helped me.	2	0	1	1	0	2	0	2	0	0	2
3. The monitor helped.	120	31	32	33	24	78	42	83	37	58	62
4. I gave up.	1	0	0	1	0	1	0	0	1	1	0
- No response	4	2	0	0	2	4	0	0	4	3	1

76. How often did you discuss ECES system with your parents?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Never.	8	0	2	2	4	5	3	5	3	5	3
2. Once.	14	4	3	6	1	7	7	8	6	8	6
3. Twice.	23	8	5	7	3	14	9	15	8	12	11
4. Three times.	21	6	2	7	6	14	7	16	5	12	9
5. Four or more times.	74	22	23	15	14	55	19	51	23	33	41

77. What was your parents' reaction to the ECES printouts?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. They didn't see any printouts.	16	5	3	5	3	10	6	7	9	10	6
2. Definitely unfavorable.	1	0	1	0	0	0	1	1	0	0	1
3. Generally unfavorable.	9	3	1	3	2	4	5	8	1	7	2
4. Generally favorable.	54	11	14	16	13	36	18	42	12	27	27
5. Definitely favorable.	56	21	15	11	9	41	15	35	21	23	33
- No response	4	0	1	2	1	4	0	2	2	3	1

78. How interested were your parents in examining the ECES printouts and discussing their meaning for you and your future plans?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Not interested at all.	8	1	1	2	4	6	2	6	2	4	4
2. Slightly interested.	12	1	2	7	2	6	6	8	4	7	5
3. Somewhat interested.	31	6	7	11	7	24	7	22	9	14	17
4. Quite interested.	41	16	9	9	7	27	14	32	9	24	17
5. Very much interested.	46	16	15	8	7	30	16	27	19	19	27
- No response	2	0	1	0	1	2	0	0	2	2	0

79. How would you rate your ability to read?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very poor.	3	2	0	1	0	3	0	0	3	3	0
2. Rather poor.	8	0	3	2	3	7	1	6	2	5	3
3. Average.	40	10	10	11	9	28	12	20	20	21	19
4. Rather good.	48	18	12	11	7	29	19	37	11	24	24
5. Very good.	39	9	9	12	9	26	13	31	8	16	23
- No response	2	1	1	0	0	2	0	1	1	1	1

Please consider the following statements. Then, indicate the extent to which you agree or disagree with each one.

80. There was enough space in the student booth.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	3	0	1	2	0	3	0	2	1	2	1
2. Mildly disagree.	4	2	0	1	1	3	1	3	1	3	1
3. Mildly agree.	33	8	7	11	7	18	15	22	11	23	10
4. Strongly agree.	99	30	27	23	19	71	28	67	32	42	57
- No response	1	0	0	0	1	0	1	1	0	0	1

81. The system was easy to learn how to use.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	0	0	0	0	0	0	0	0	0	0	0
2. Mildly disagree.	8	0	3	3	2	3	5	5	3	4	4
3. Mildly agree.	35	10	4	11	10	24	11	22	13	18	17
4. Strongly agree.	96	30	28	23	15	68	28	67	29	48	48
- No response	1	0	0	0	1	0	1	1	0	0	1

82. The film cartridges were easy to identify.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	0	0	0	0	0	0	0	0	0	0	0
2. Mildly disagree.	2	0	1	0	1	1	1	2	0	2	0
3. Mildly agree.	10	3	2	2	3	4	6	6	4	9	1
4. Strongly agree.	127	37	32	35	23	90	37	86	41	59	68
- No response	1	0	0	0	1	0	1	1	0	0	1

83. The film cartridges were easy to insert into the equipment.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	0	0	0	0	0	0	0	0	0	0	0
2. Mildly disagree.	1	0	1	0	0	0	1	1	0	0	1
3. Mildly agree.	11	3	4	2	2	8	3	5	6	8	3
4. Strongly agree.	127	37	30	35	25	87	40	88	39	62	65
- No response	1	0	0	0	1	0	1	1	0	0	1

84. The sign-on procedure was simple enough.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	2	0	0	2	0	1	1	2	0	1	1
2. Mildly disagree.	11	2	2	4	3	5	6	9	2	7	4
3. Mildly agree.	31	11	7	9	4	22	9	20	11	15	16
4. Strongly agree.	95	27	26	22	20	67	28	63	32	47	48
- No response	1	0	0	0	1	0	1	1	0	0	1

85. My parents felt that some "magic formula" in the computer would decide my future.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	96	25	24	26	21	67	29	69	27	42	54
2. Mildly disagree.	19	7	5	4	3	13	6	14	5	10	9
3. Mildly agree.	12	4	3	5	0	9	3	6	6	9	3
4. Strongly agree.	10	3	2	2	3	4	6	3	7	8	2
- No response	3	1	1	0	1	2	1	3	0	1	2

86. I felt that my future was being decided for me.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	82	23	22	16	21	62	20	59	23	34	48
2. Mildly disagree.	23	8	6	7	2	11	12	17	6	13	10

86. (cont.)

	Total	9	10	11	12	W	B	C	N-C	M	F
3. Mildly agree.	23	5	6	10	2	15	8	12	11	13	10
4. Strongly agree.	11	4	1	4	2	7	4	6	5	10	1
- No response	1	0	0	0	1	0	1	1	0	0	1

87. I felt that ECES tried to choose an occupation for me.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	77	20	19	22	16	59	18	58	19	32	45
2. Mildly disagree.	22	4	6	7	5	16	7	14	8	12	10
3. Mildly agree.	22	10	4	5	3	12	10	12	10	11	11
4. Strongly agree.	18	6	6	3	3	8	10	10	8	15	3
- No response	1	0	0	0	1	0	1	1	0	0	1

88. I feel that ECES tried to choose a major for me.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	81	22	22	22	15	61	20	60	21	39	42
2. Mildly disagree.	20	3	5	6	6	15	5	15	5	8	12
3. Mildly agree.	24	11	2	7	4	13	11	13	11	12	12
4. Strongly agree.	13	3	6	2	2	6	7	5	8	11	2
- No response	2	1	0	0	1	0	2	2	0	0	2

89. The pictures on the screen were generally quite clear.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	2	2	0	0	0	2	0	2	0	1	1
2. Mildly disagree.	5	3	1	1	1	4	1	3	2	3	2
3. Mildly agree.	27	6	8	8	5	18	9	18	9	15	12
4. Strongly agree.	105	29	26	28	22	71	34	71	34	51	54
- No response	1	0	0	0	1	0	1	1	0	0	1

90. The pictures helped me understand occupations better.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	6	0	1	1	4	5	1	6	0	3	3
2. Mildly disagree.	19	5	6	7	1	14	5	14	5	10	9
3. Mildly agree.	48	11	14	11	12	40	8	35	13	22	26
4. Strongly agree.	66	24	14	18	10	36	30	39	27	35	31
- No response	1	0	0	0	1	0	1	1	0	0	1

91. I would have liked more pictures showing occupations.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	5	1	0	2	2	5	0	4	1	4	1
2. Mildly disagree.	22	9	4	7	2	17	5	17	5	8	14
3. Mildly agree.	37	9	8	9	11	23	14	28	9	20	17
4. Strongly agree.	75	21	23	19	12	50	25	45	30	38	37
- No response	1	0	0	0	1	0	1	1	0	0	1

92. The printed material on the screen was easy to read.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	1	0	0	0	1	1	0	1	0	1	0
2. Mildly disagree.	3	1	1	1	0	2	1	2	1	1	2
3. Mildly agree.	28	10	5	7	6	16	12	18	10	21	7
4. Strongly agree.	107	29	29	29	20	76	31	73	34	47	60
- No response	1	0	0	0	1	0	1	1	0	0	1

93. The vocabulary on the screen was easy to read.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	0	0	0	0	0	0	0	0	0	0	0
2. Mildly disagree.	3	1	1	1	0	2	1	2	1	3	0
3. Mildly agree.	24	7	4	8	5	14	10	17	7	18	6
4. Strongly agree.	112	32	30	28	22	79	33	75	37	49	63
- No response	1	0	0	0	1	0	1	1	0	0	1

94. The material on the typewriter was easy to read.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	0	0	0	0	0	0	0	0	0	0	0
2. Mildly disagree.	5	0	2	3	0	4	1	2	3	2	3
3. Mildly agree.	26	7	6	7	6	17	9	20	6	21	5
4. Strongly agree.	108	33	27	27	21	74	34	72	36	47	61
- No response	1	0	0	0	1	0	1	1	0	0	1

95. The vocabulary on the typewriter was easy to understand.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	0	0	0	0	0	0	0	0	0	0	0
2. Mildly disagree.	4	1	1	1	1	3	1	2	2	4	0
3. Mildly agree.	21	6	6	5	4	12	9	14	7	15	6
4. Strongly agree.	114	33	28	31	22	80	34	78	36	51	63
- No response	1	0	0	0	1	0	1	1	0	0	1

96. The cartoons in the work samples were interesting.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	11	2	2	2	5	9	2	6	5	7	4
2. Mildly disagree.	17	5	3	6	3	12	5	15	2	9	8
3. Mildly agree.	42	11	10	11	10	31	11	33	9	21	21
4. Strongly agree.	66	22	17	18	9	40	26	38	28	33	33
- No response	4	0	3	0	1	3	1	3	1	0	4

97. The work samples were useful and informative.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	6	2	2	2	0	5	1	3	3	3	3
2. Mildly disagree	17	4	2	6	5	15	2	14	3	10	7
3. Mildly agree.	43	14	10	7	12	22	21	35	8	21	22
4. Strongly agree.	69	19	19	21	10	49	20	39	30	35	34
- No response	5	1	2	1	1	4	1	4	1	1	4

98. There should have been more work samples.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	8	4	0	3	1	6	2	7	1	6	2
2. Mildly disagree.	24	4	3	7	10	18	6	14	10	7	17
3. Mildly agree.	57	16	18	11	12	35	22	41	16	31	26
4. Strongly agree.	47	16	12	5	4	33	14	30	17	26	21
- No response	4	0	2	1	1	3	1	3	1	0	4

99. There should have been more difficult and longer work samples.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	21	8	6	6	1	16	5	14	7	10	11
2. Mildly disagree.	44	10	13	12	9	31	13	31	13	21	23
3. Mildly agree.	42	12	9	10	11	23	19	29	13	19	23
4. Strongly agree.	27	9	5	7	6	20	7	16	9	19	8
- No response	6	1	2	2	1	5	1	5	1	1	5

100. The introductory part of the system was too long and confusing.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	45	13	13	9	10	32	13	32	13	20	25
2. Mildly disagree.	36	12	9	8	7	27	9	23	13	17	19
3. Mildly agree.	30	9	8	8	5	18	12	21	9	14	16
4. Strongly agree.	27	5	5	12	5	17	10	17	10	18	9
- No response	2	1	0	0	1	1	1	2	0	1	1

101. The ECES system was personal enough.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	13	1	5	3	4	9	4	10	3	6	7
2. Mildly disagree.	29	7	10	9	3	18	11	23	6	10	19
3. Mildly agree.	50	15	10	15	10	33	17	33	17	20	21
4. Strongly agree.	46	17	9	10	10	35	11	27	19	25	21
- No response	2	0	1	0	1	0	2	2	0	0	2

102. The college finder section was useful.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Strongly disagree.	24	3	10	7	4	14	10	14	10	14	10
2. Mildly disagree.	13	3	1	6	3	8	5	10	3	6	7
3. Mildly agree.	24	10	6	7	1	19	5	14	10	10	14
4. Strongly agree.	44	17	12	10	5	27	17	24	20	25	19
- No response	35	7	6	7	15	27	8	33	2	15	20

103. Omitted.

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*Indicates incorrect coding for this item with some cases lost as a result.

Appendix C

FREQUENCY DISTRIBUTIONS OF RESPONSES TO THE
STUDENT REACTION FORM, SESSIONS 1, 3, 5, AND 7

Session 1

1. How helpful to you were the instructions and information you saw today on the SCREEN?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	95	27	23	27	18	58	37	59	36	43	52
2. Fairly helpful.	53	15	15	10	13	35	18	37	16	34	19
3. A little helpful	10	2	1	5	2	10	0	7	3	5	5
4. Not helpful at all.	2	0	1	0	1	2	0	2	0	2	0
5. I did not use it today.	2	1	0	0	1	1	1	2	0	0	2
- No response	1	0	0	0	1	1	0	1	0	1	0

2. How helpful to you were the instructions and information you saw today on the TYPEWRITER?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	110	32	30	29	19	73	37	69	41	53	57
2. Fairly helpful.	34	8	7	8	11	20	14	25	9	21	13
3. A little helpful.	13	4	1	5	3	11	3	10	3	7	6
4. Not helpful at all.	1	0	1	0	0	1	0	1	0	1	0
5. I did not use it today.	3	1	0	0	2	2	1	2	1	1	2
- No response	2	0	1	0	1	1	1	1	1	2	0

3. How helpful to you were the instructions and information you saw today in the BOOKLET?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful	29	10	5	9	5	18	11	24	5	7	22
2. Fairly helpful	51	14	15	14	8	34	17	32	19	34	17
3. A little helpful.	28	6	9	6	7	18	10	20	8	18	10
4. Not helpful at all.	12	2	4	5	1	10	2	8	4	9	3
5. I did not use it today.	39	13	5	7	14	26	13	22	17	15	24
- No response	4	0	2	1	1	1	3	2	2	2	2

4. How easy was it to understand the instructions and information you saw today on the SCREEN?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	109	30	31	24	24	73	36	73	36	58	51
2. Fairly helpful.	50	14	8	17	11	33	17	32	18	25	25
3. A little helpful.	2	0	1	1	0	0	2	1	1	1	1
4. Not helpful at all.	0	0	0	0	0	0	0	0	0	0	0
5. I did not use it today.	1	1	0	0	0	0	1	1	0	0	1
- No response	1	0	0	0	1	1	0	1	0	1	0

5. How easy was it to understand the instructions and information you saw today on the TYPEWRITER?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	125	34	32	33	26	82	43	85	40	62	63
2. Fairly helpful.	31	9	7	8	7	21	10	20	11	17	14
3. A little helpful.	3	1	0	0	2	2	1	0	3	3	0
4. Not helpful at all.	1	0	0	1	0	1	0	1	0	1	0
5. I did not use it today.	1	1	0	0	0	0	1	1	0	0	1
- No response	2	0	1	0	1	1	1	1	1	2	0

6. How easy was it to understand the instructions and information you saw today in the BOOKLET?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	56	16	12	16	12	39	17	46	10	29	27
2. Fairly helpful.	51	8	18	15	10	32	19	30	21	32	19
3. A little helpful.	6	3	1	1	1	3	3	4	2	4	2
4. Not helpful at all.	0	0	0	0	0	0	0	0	0	0	0
5. I did not use it today.	46	18	7	10	11	31	15	26	20	17	29
- No response	4	0	2	0	2	2	2	2	2	3	1

7. Which one of the following best describes how much progress you made today in thinking about your future?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I'm more confused than when I started today.	8	1	4	0	3	5	3	3	5	3	5
2. I'm about where I was when I started today.	41	9	8	15	9	29	12	32	9	20	21
3. Today I've made some progress but not a lot.	87	30	20	20	17	58	29	57	30	50	37
4. I've really learned a lot today.	23	4	8	7	4	11	12	13	10	10	13
- No response	4	1	0	0	3	4	0	3	1	2	2

8. How much did you like working on the ECES system today?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I liked it a lot.	149	42	38	38	31	96	53	98	51	75	74
2. I liked it some, but not a lot.	10	3	1	3	3	7	3	7	3	6	4
3. I liked it a little.	3	0	1	1	1	3	0	2	1	3	0
4. I didn't like it at all.	0	0	0	0	0	0	0	0	0	0	0
- No response	1	0	0	0	1	1	0	1	0	1	0

9. How much help do you think you got today in understanding your interests better?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	60	15	16	15	14	37	23	38	22	28	32
2. Some help, but not a lot.	66	23	17	14	12	42	24	43	23	39	27
3. Just a little help.	20	3	3	10	4	17	3	14	6	9	11
4. No help at all.	7	1	2	1	3	4	3	6	1	4	3
5. Does not apply today.	6	2	2	1	1	4	2	4	2	2	4
- No response	4	1	0	1	2	3	1	3	1	3	1

10. How much help do you think you got today in understanding your abilities better.

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	69	18	16	19	16	41	28	40	29	32	37
2. Some help, but not a lot.	53	15	12	15	11	39	14	37	16	31	22
3. Just a little help.	16	3	5	6	2	12	4	12	4	9	7
4. No help at all.	12	3	4	1	4	5	7	11	1	5	7
5. Does not apply today.	10	5	3	1	1	7	3	6	4	6	4
- No response	3	1	0	0	2	3	0	2	1	2	1

11. How much help do you think you got today in seeing connections between your interests and possible occupations?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	47	17	10	11	9	24	23	28	19	23	24
2. Some help, but not a lot.	54	10	17	14	13	40	14	33	21	30	24
3. Just a little help.	22	6	8	4	4	14	8	14	8	12	10
4. No help at all.	15	5	3	4	3	9	6	13	2	9	6
5. Does not apply today.	21	7	2	7	5	18	3	17	4	8	13
- No response	4	0	0	2	2	2	2	3	1	3	1

12. How much help do you think you got today in seeing connections between your abilities and possible occupations?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	45	17	10	9	9	24	21	25	20	22	23
2. Some help, but not a lot.	53	11	17	14	11	36	17	30	23	31	22
3. Just a little help.	19	8	6	2	3	15	4	14	5	12	7
4. No help at all.	16	3	2	6	5	9	7	13	3	9	7
5. Does not apply today.	26	6	5	9	6	21	5	22	4	8	18
- No response	4	0	0	2	2	2	2	4	0	3	1

13. How much help do you think you got today in discovering some new occupational possibilities you might look into?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	33	9	8	8	8	17	16	19	14	17	16
2. Some help, but not a lot.	37	12	9	8	8	24	13	21	16	20	17
3. Just a little help.	22	5	9	6	2	17	5	12	10	16	6
4. No help at all.	35	9	10	7	9	24	11	27	8	17	18
5. Does not apply today.	32	9	4	12	7	22	10	25	7	11	21
- No response	4	1	0	1	2	3	1	4	0	4	0

14. How much help do you think you got today in getting useful facts about occupations you explored?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	16	6	2	2	6	7	9	5	11	13	3
2. Some help, but not a lot.	30	7	9	8	6	18	12	15	15	16	14
3. Just a little help.	20	6	7	4	3	14	6	10	10	12	8
4. No help at all.	47	14	14	11	8	34	13	38	9	23	24
5. Does not apply today.	46	11	8	16	11	31	15	37	9	18	28
- No response	4	1	0	1	2	3	1	3	1	3	1

15. How much help do you think you got today in finding out about courses you would need for further education and training?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	5	3	0	2	0	3	2	2	3	3	2
2. Some help, but not a lot.	27	5	7	5	10	13	14	11	16	17	10
3. Just a little help.	20	7	5	6	2	16	4	7	13	11	9
4. No help at all.	58	17	20	13	8	39	19	44	14	30	28
5. Does not apply today	50	12	8	16	14	33	17	41	9	21	29
- No response	3	1	0	0	2	3	0	3	0	3	0

16. How much help do you think you got today in finding out about high school majors you should consider?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	5	3	0	1	1	2	3	0	5	2	3
2. Some help, but not a lot.	16	5	2	6	3	7	9	7	9	12	4

16. (cont.)

	Total	9	10	11	12	W	B	C	N-C	M	F
3. Just a little help.	17	6	5	3	3	14	3	5	12	10	7
4. No help at all.	71	18	24	16	13	47	24	51	20	37	34
5. Does not apply today.	50	11	9	16	14	33	17	41	9	21	29
- No response	4	2	0	0	2	4	0	4	0	3	1

17. How much help do you think you got today in finding out about courses you might take in college or vocational school?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	6	3	0	2	1	3	3	0	6	4	2
2. Some heop, but not a lot.	13	1	4	4	4	7	6	5	8	10	3
3. Just a little help.	16	7	3	4	2	10	6	8	8	9	7
4. No help at all.	74	20	25	16	13	50	24	51	23	38	36
5. Does not apply today.	50	12	8	16	14	33	17	40	10	21	29
- No response	4	2	0	0	2	4	0	4	0	3	1

18. How much help do you think you got today in finding out about colleges or vocational schools you might want to consider?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	4	2	1	1	0	1	3	1	3	3	1
2. Some help, but not a lot.	13	1	1	6	5	8	5	3	10	10	3
3. Just a little help.	9	6	2	1	0	8	1	2	7	6	3
4. No help at all.	82	22	27	18	15	53	29	57	25	41	41
5. Does not apply today.	51	12	9	16	14	33	18	41	10	22	29
- No response	4	2	0	0	2	4	0	4	0	3	1

Session 3

1. How helpful to you were the instructions and information you saw today on the SCREEN?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	88	25	19	24	20	59	29	56	32	41	47
2. Fairly helpful.	39	11	12	9	7	30	9	28	11	23	16
3. A little helpful.	12	3	3	3	3	3	9	9	3	7	5
4. Not helpful at all.	6	1	3	1	1	4	2	5	1	4	2
5. I did not use it today.	2	1	0	1	0	1	1	2	0	2	0
- No response	1	0	1	0	0	1	0	1	0	0	1

2. How helpful to you were the instructions and information you saw today on the TYPEWRITER?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	97	28	19	28	22	66	31	64	33	47	50
2. Fairly helpful.	23	5	10	4	4	19	4	15	8	14	9
3. A little helpful.	13	5	2	3	3	4	9	11	2	8	5
4. Not helpful at all.	7	2	3	1	1	4	3	4	3	5	2
5. I did not use it today.	3	1	0	1	1	2	1	3	0	2	1
- No response	5	0	4	1	0	3	2	4	1	1	4

3. How helpful to you were the instructions and information you saw today in the BOOKLET?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	43	10	8	16	9	27	16	27	16	16	27
2. Fairly helpful.	41	11	12	9	9	29	12	33	8	26	15
3. A little helpful.	34	13	9	4	8	23	11	19	15	19	15
4. Not helpful at all.	5	1	0	1	3	3	2	3	2	4	1
5. I did not use it today.	17	5	3	7	2	11	6	12	5	9	8
- No response	8	1	6	1	0	5	3	7	1	3	5

4. How easy was it to understand the instructions and information you saw today on the SCREEN?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	106	30	28	23	25	76	30	71	35	48	58
2. Fairly helpful.	35	9	8	13	5	19	16	25	10	25	10
3. A little helpful.	4	1	1	1	1	1	3	2	2	2	2
4. Not helpful at all.	0	0	0	0	0	0	0	0	0	0	0
5. I did not use it today.	2	1	0	1	0	1	1	2	0	2	0
- No response	1	0	1	0	0	1	0	1	0	0	1

5. How easy was it to understand the instructions and information you saw today on the TYPEWRITER?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	115	35	26	29	25	81	34	77	38	59	56
2. Fairly helpful.	20	5	7	6	4	13	7	15	5	14	6
3. A little helpful.	3	1	0	1	1	0	3	2	1	1	2
4. Not helpful at all.	3	1	2	0	0	0	3	1	2	0	3
5. I did not use it today.	3	1	0	1	1	2	1	3	0	2	1
- No response	4	0	3	1	0	2	2	3	1	1	3

6. How easy was it to understand the instructions and information you saw today in the BOOKLET?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	84	24	19	21	20	63	21	59	25	41	43
2. Fairly helpful.	30	10	9	7	4	19	11	20	10	19	11
3. A little helpful.	7	1	3	2	1	1	6	2	5	3	4
4. Not helpful at all.	0	0	0	0	0	0	0	0	0	0	0
5. I did not use it today.	19	5	3	7	4	11	8	13	6	11	8
- No response	8	1	4	1	2	4	4	7	1	3	5

7. Which one of the following best describes how much progress you made today in thinking about your future?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I'm more confused than when I started today.	6	1	1	4	0	1	5	5	1	3	3
2. I'm about where I was when I started today.	21	5	7	5	4	12	9	17	4	13	8
3. Today I've made some progress but not a lot.	53	13	17	10	13	37	16	39	14	26	27
4. I've really learned a lot today.	66	21	12	19	14	47	19	39	27	35	31
- No response	2	1	1	0	0	1	1	1	1	0	2

8. How much did you like working on the ECES system today?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I liked it a lot.	121	38	31	28	24	82	39	81	40	60	61
2. I like it some, but not a lot.	15	0	4	7	4	9	6	11	4	8	7
3. I liked it a little.	8	1	2	3	2	5	3	5	3	6	2
4. I didn't like it at all.	3	2	0	0	1	1	2	3	0	3	0
- No response	1	0	1	0	0	1	0	1	0	0	1

9. How much help do you think you got today in understanding your interests better?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	61	23	10	14	14	43	18	37	24	27	34
2. Some help, but not a lot.	51	11	17	14	9	32	19	37	14	32	19
3. Just a little help.	11	1	5	2	3	6	5	7	4	4	7
4. No help at all.	15	4	1	6	4	9	6	12	3	12	3
5. Does not apply today.	9	2	4	2	1	7	2	7	2	2	7
- No response	1	0	1	0	0	1	0	1	0	0	1

10. How much help do you think you got today in understanding your abilities better?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	60	20	10	14	16	42	18	38	22	26	34
2. Some help, but not a lot.	48	13	15	13	7	31	17	36	12	29	19
3. Just a little help.	14	2	5	2	5	6	8	7	7	8	6
4. No help at all.	13	4	2	5	2	10	3	10	3	12	1
5. Does not apply today.	11	2	4	4	1	8	3	9	2	2	9
- No response	2	0	2	0	0	1	1	1	1	0	2

11. How much help do you think you got today in seeing connections between your interests and possible occupations?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	80	28	13	22	17	55	25	52	28	42	38
2. Some help, but not a lot.	31	4	10	9	8	20	11	22	9	16	15
3. Just a little help.	14	4	5	3	2	9	5	10	4	8	6
4. No help at all.	9	2	1	3	3	5	4	7	2	9	0
5. Does not apply today.	9	3	4	1	1	6	3	7	2	1	8
- No response	5	0	5	0	0	3	2	3	2	1	4

12. How much help do you think you got today in seeing connections between your abilities and possible occupations?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	71	23	17	17	14	50	21	42	29	37	34
2. Some help, but not a lot.	37	6	9	12	10	23	14	26	11	21	16
3. Just a little help.	11	4	3	2	2	7	4	8	3	5	6
4. No help at all.	13	5	3	2	3	7	6	11	2	12	1
5. Does not apply today.	11	2	3	4	2	7	4	10	1	2	9
- No response	5	1	3	1	0	4	1	4	1	0	5

13. How much help do you think you got today in discovering some new occupational possibilities you might look into?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	61	15	15	20	11	41	20	36	25	33	28
2. Some help, but not a lot.	30	8	8	7	7	20	10	20	10	19	11
3. Just a little help.	12	0	3	4	5	8	4	10	2	9	3
4. No help at all.	23	9	6	4	4	10	13	18	5	12	11
5. Does not apply today.	17	7	4	2	4	14	3	12	5	4	13
- No response	5	2	2	1	0	5	0	5	0	0	5

14. How much help do you think you got today in getting useful facts about occupations you explored?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	68	18	15	20	15	48	20	46	22	34	34
2. Some help, but not a lot.	40	8	13	12	7	25	15	25	15	21	19
3. Just a little help.	8	1	2	4	1	6	2	7	1	4	4
4. No help at all.	14	8	2	1	3	5	9	10	4	11	3
5. Does not apply today.	13	6	3	1	3	10	3	9	4	5	8
- No response	5	0	3	0	2	4	1	4	1	2	3

15. How much help do you think you got today in finding out about courses you would need for further education and training?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	55	16	15	17	7	35	20	28	27	31	24
2. Some help, but not a lot.	21	6	5	8	2	17	4	13	8	13	8
3. Just a little help.	9	1	4	1	3	4	5	8	1	6	3
4. No help at all.	25	9	3	7	6	11	14	22	3	17	8
5. Does not apply today.	29	7	6	5	11	23	6	23	6	7	22
- No response	9	2	5	0	2	8	1	7	2	3	6

16. How much help do you think you got today in finding out about high school majors you should consider?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	38	14	9	13	2	24	14	21	17	19	19
2. Some help, but not a lot.	16	4	4	5	3	13	3	7	9	10	6

16. (cont.)

	Total	9	10	11	12	W	B	C	N-C	M	F
3. Just a little help.	15	5	7	3	0	7	8	10	5	10	5
4. No help at all.	32	7	3	10	12	17	15	24	8	24	8
5. Does not apply today.	39	10	10	7	12	31	8	32	7	11	28
- No response	8	1	5	0	2	6	2	7	1	3	5

17. How much help do you think you got today in finding out about courses you might take in college or vocational school?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	38	11	7	12	8	27	11	19	19	21	17
2. Some help, but not a lot.	18	5	6	5	2	11	7	10	8	10	8
3. Just a little help.	10	4	2	3	1	6	4	6	4	7	3
4. No help at all.	33	8	6	9	10	17	16	26	7	23	10
4. Does not apply today.	39	10	11	9	9	29	10	31	8	12	27
- No response	10	3	6	0	1	8	2	9	1	4	6

18. How much help do you think you got today in finding out about colleges or vocational schools you might want to consider?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	16	5	3	4	4	9	7	4	12	10	6
2. Some help, but not a lot.	14	1	5	6	2	8	6	3	11	7	7
3. Just a little help.	8	4	2	1	1	5	3	6	2	6	2
4. No help at all.	45	13	9	12	11	25	20	35	10	34	11
5. Does not apply today.	53	15	13	13	12	40	13	42	11	16	37
- No response	12	3	6	2	1	11	1	11	1	4	8

Session 5

1. How helpful to you were the instructions and information you saw today on the SCREEN?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	73	27	18	15	13	45	28	52	21	33	40
2. Fairly helpful.	23	7	5	7	4	19	4	15	8	15	8
3. A little helpful.	10	0	2	6	2	8	2	6	4	6	4
4. Not helpful at all.	7	1	2	2	2	4	3	6	1	4	3
5. I did not use it today.	3	1	0	2	0	2	1	1	2	3	0
- No response	1	0	1	0	0	1	0	1	0	0	1

2. How helpful to you were the instructions and information you saw today on the TYPEWRITER?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	59	22	14	13	10	35	24	41	18	31	28
2. Fairly helpful.	29	8	6	8	7	22	7	21	8	15	14
3. A little helpful.	16	3	5	6	2	15	1	10	6	6	10
4. Not helpful at all.	8	2	2	2	2	4	4	7	1	5	3
5. I did not use it today.	4	1	1	2	0	3	1	2	2	3	1
- No response	1	0	0	1	0	0	1	0	1	1	0

3. How helpful to you were the instructions and information you saw today in the BOOKLET?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	46	14	12	14	6	27	19	31	15	21	25
2. Fairly helpful.	32	10	7	7	8	26	6	21	11	15	17
3. A little helpful.	19	6	6	4	3	12	7	16	3	10	9
4. Not helpful at all.	6	1	1	2	2	5	1	5	1	5	1
5. I did not use it today.	10	4	1	3	2	7	3	5	5	7	3
- No response	4	1	1	2	0	2	2	3	1	3	1

4. How easy was it to understand the instructions and information you saw today on the SCREEN?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	90	29	23	20	18	59	31	66	24	44	46
2. Fairly helpful.	16	4	3	7	2	12	4	8	8	11	5
3. A little helpful.	4	2	0	1	1	3	1	3	1	1	3
4. Not helpful at all.	2	0	0	2	0	1	1	1	1	1	1
5. I did not use it today.	3	1	0	2	0	2	1	1	2	3	0
- No response	2	0	2	0	0	2	0	2	0	1	1

5. How easy was it to understand the instructions and information you saw today on the TYPEWRITER?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	94	30	22	24	18	62	32	68	26	45	49
2. Fairly helpful.	16	4	4	5	3	13	3	9	7	12	4
3. A little helpful.	2	1	0	1	0	1	1	2	0	0	2
4. Not helpful at all.	0	0	0	0	0	0	0	0	0	0	0
5. I did not use it today.	3	1	1	1	0	2	1	1	2	2	1
- No response	2	0	1	1	0	1	1	1	1	2	0

6. How easy was it to understand the instructions and information you saw today in the BOOKLET?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	81	21	23	20	17	52	29	59	22	36	45
2. Fairly helpful.	17	9	1	5	2	13	4	10	7	12	5
3. A little helpful.	2	1	1	0	0	1	1	2	0	1	1
4. Not helpful at all.	2	0	0	1	1	2	0	1	1	2	0
5. I did not use it today.	10	4	1	4	1	7	3	5	5	7	3
- No response	5	1	2	2	0	4	1	4	1	3	2

7. Which one of the following best describes how much progress you made today in thinking about your future?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I'm more confused than when I started today.	8	0	2	3	3	6	2	6	2	5	3
2. I'm about where I was when I started today.	21	5	4	5	7	15	6	15	6	13	8
3. Today I've made some progress but not a lot.	50	16	15	16	3	35	15	34	16	24	26
4. I've really learned a lot today.	36	14	7	7	8	22	14	26	10	18	18
- No response	2	1	0	1	0	1	1	0	2	1	1

8. How much did you like working on the ECES system today?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I liked it a lot.	83	30	20	20	13	54	29	58	25	42	41
2. I like it some, but not a lot.	19	2	5	8	4	15	4	13	6	8	11
3. I liked it a little.	9	3	1	2	3	6	3	6	3	5	4
4. I didn't like it at all.	5	1	2	1	1	3	2	4	1	5	0
- No response	1	0	0	1	0	1	0	0	1	1	0

9. How much help do you think you got today in understanding your interests better?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	44	18	11	7	8	27	17	26	18	24	20
2. Some help, but not a lot.	38	10	10	11	7	26	12	25	13	20	18
3. Just a little help.	9	0	2	6	1	7	2	9	0	7	2
4. No help at all.	10	4	3	2	1	7	3	7	3	5	5
5. Does not apply today.	15	3	2	6	4	11	4	14	1	5	10
- No response	1	1	0	0	0	1	0	0	1	0	1

10. How much help do you think you got today in understanding your abilities better?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	35	11	9	9	6	23	12	25	10	17	18
2. Some help, but not a lot.	31	14	8	3	6	23	8	14	17	21	10
3. Just a little help.	12	1	2	8	1	8	4	10	2	8	4
4. No help at all.	14	4	4	3	3	9	5	11	3	9	5
5. Does not apply today.	22	5	5	8	4	14	8	20	2	6	16
- No response	3	1	0	1	1	2	1	1	2	0	3

11. How much help do you think you got today in seeing connections between your interests and possible occupations?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	37	14	7	7	9	24	13	23	14	20	17
2. Some help, but not a lot.	33	11	10	7	5	22	11	17	16	19	14
3. Just a little help.	14	3	1	8	2	11	3	14	0	9	5
4. No help at all.	12	3	5	3	1	6	6	9	3	7	5
5. Does not apply today.	17	2	5	6	4	12	5	15	2	5	12
- No response	4	3	0	1	0	4	0	3	1	1	3

12. How much help do you think you got today in seeing connections between your abilities and possible occupations?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	43	15	10	10	8	31	12	25	18	22	21
2. Some help, but not a lot.	30	10	8	5	7	18	12	17	13	19	11
3. Just a little help.	10	3	3	3	1	7	3	10	0	7	3
4. No help at all.	12	3	4	4	1	7	5	9	3	7	5
5. Does not apply today.	19	3	2	10	4	13	6	18	1	6	13
- No response	3	2	1	0	0	3	0	2	1	0	3

13. How much help do you think you got today in discovering some new occupational possibilities you might look into?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	50	15	11	14	10	30	20	32	18	23	27
2. Some help, but not a lot.	21	6	8	2	5	17	4	13	8	11	10
3. Just a little help.	10	2	1	5	2	8	2	9	1	9	1
4. No help at all.	13	6	2	3	2	6	7	9	4	10	3
5. Does not apply today.	18	5	4	7	2	14	4	15	3	7	11
- No response	5	2	2	1	0	4	1	3	2	1	4

14. How much help do you think you got today in getting useful facts about occupations you explored?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	60	21	12	15	12	44	16	44	16	28	32
2. Some help, but not a lot.	33	9	7	11	6	22	11	19	14	19	14
3. Just a little help.	4	0	4	0	0	2	2	3	1	2	2
4. No help at all.	8	2	2	2	2	3	5	5	3	6	2
5. Does not apply today.	10	3	3	3	1	6	4	9	1	6	4
- No response	2	1	0	1	0	2	0	1	1	0	2

15. How much help do you think you got today in finding out about courses you would need for further education and training?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	41	16	9	8	8	30	11	27	14	21	20
2. Some help, but not a lot.	26	10	4	8	4	15	11	13	13	16	10
3. Just a little help.	8	2	3	2	1	7	1	8	0	5	3
4. No help at all.	14	2	5	4	3	6	8	10	4	8	6
5. Does not apply today.	25	6	5	9	5	20	5	21	4	11	14
- No response	3	0	2	1	0	1	2	2	1	0	3

16. How much help do you think you got today in finding out about high school majors you should consider?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	23	12	5	3	3	18	5	11	12	13	10
2. Some help, but not a lot.	17	6	3	4	4	12	5	8	9	12	5

16. (cont.)

	Total	9	10	11	12	W	B	C	N-C	M	F
3. Just a little help.	5	3	0	1	1	3	2	2	3	3	2
4. No help at all.	29	6	9	10	4	14	15	23	6	21	8
5. Does not apply today.	39	8	8	14	9	29	10	35	4	11	28
- No response	4	1	3	0	0	3	1	2	2	1	3

17. How much help do you think you got today in finding out about courses you might take in college or vocational school?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	35	15	7	7	6	24	11	26	9	15	20
2. Some help, but not a lot.	18	5	7	3	3	10	8	8	10	10	8
3. Just a little help.	7	2	2	1	2	5	2	4	3	6	1
4. No help at all.	20	4	4	8	4	11	9	15	5	15	5
5. Does not apply today.	32	10	6	11	5	26	6	24	8	14	18
- No response	5	0	2	2	1	3	2	4	1	1	4

18. How much help do you think you got today in finding out about colleges or vocational schools you might want to consider?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	13	6	3	3	1	11	2	4	9	10	3
2. Some help, but not a lot.	7	2	2	1	2	5	2	1	6	4	3
3. Just a little help.	6	3	0	2	1	3	3	2	4	3	3
4. No help at all.	35	9	12	10	4	18	17	29	6	26	9
5. Does not apply today.	50	15	8	15	12	38	12	42	8	17	33
- No response	6	1	3	1	1	4	2	3	3	1	5

Session 7

1. How helpful to you were the instructions and information you saw today on the SCREEN?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	47	18	12	11	6	33	14	29	18	24	23
2. Fairly helpful.	21	7	3	5	6	13	8	16	5	12	9
3. A little helpful.	8	4	3	1	0	5	3	6	2	7	1
4. Not helpful at all.	2	0	1	1	0	2	0	2	0	0	2
5. I did not use it today.	8	2	2	4	0	6	2	7	1	3	5
- No response	1	0	0	1	0	1	0	1	0	0	1

2. How helpful to you were the instructions and information you saw today on the TYPEWRITER?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	50	18	11	13	8	33	17	31	19	25	25
2. Fairly helpful.	20	8	4	4	4	16	4	16	4	12	8
3. A little helpful.	9	4	2	3	0	6	3	7	2	6	3
4. Not helpful at all.	3	1	1	1	0	3	0	3	0	1	2
5. I did not use it today.	1	0	1	0	0	1	0	1	0	0	1
- No response	4	0	2	2	0	1	3	3	1	2	2

3. How helpful to you were the instructions and information you saw today in the BOOKLET?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	37	13	9	10	5	25	12	22	15	17	20
2. Fairly helpful.	23	9	4	5	5	18	5	17	6	13	10
3. A little helpful.	10	4	3	3	0	7	3	9	1	8	2
4. Not helpful at all.	5	2	1	2	0	4	1	5	0	3	2
5. I did not use it today.	6	2	1	1	2	4	2	3	3	2	4
- No response	6	1	3	2	0	2	4	5	1	3	3

4. How easy was it to understand the instructions and information you saw today on the SCREEN?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	62	23	15	15	9	43	19	44	18	33	29
2. Fairly helpful.	13	5	2	3	3	8	5	7	6	8	5
3. A little helpful.	1	0	1	0	0	0	1	1	0	1	0
4. Not helpful at all.	2	1	1	0	0	2	0	1	1	1	1
5. I did not use it today.	8	2	2	4	0	6	2	7	1	3	5
- No response	1	0	0	1	0	1	0	1	0	0	1

5. How easy was it to understand the instructions and information you saw today on the TYPEWRITER?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	66	25	16	15	10	45	21	46	20	31	35
2. Fairly helpful.	14	4	2	6	2	12	2	11	3	11	3
3. A little helpful.	1	1	0	0	0	0	1	0	1	1	0
4. Not helpful at all.	1	1	0	0	0	1	0	0	1	1	0
5. I did not use it today.	1	0	1	0	0	1	0	1	0	0	1
- No response	4	0	2	2	0	1	3	3	1	2	2

6. How easy was it to understand the instructions and information you saw today in the BOOKLET?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. Very helpful.	63	23	16	17	7	43	20	46	17	31	32
2. Fairly helpful.	12	5	2	3	2	11	1	3	4	10	2
3. A little helpful.	0	0	0	0	0	0	0	0	0	0	0
4. Not helpful at all.	1	1	0	0	0	1	0	0	1	1	0
5. I did not use it today.	5	1	1	1	2	3	2	3	2	1	4
- No response	6	1	2	2	1	2	4	4	2	3	3

7. Which one of the following best describes how much progress you made today in thinking about your future?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I'm more confused than when I started today.	5	1	2	1	1	3	2	4	1	3	2
2. I'm about where I was when I started today.	14	4	3	3	4	11	3	10	4	6	8
3. Today I've made some progress but not a lot.	41	16	11	10	4	27	14	32	9	26	15
4. I've really learned a lot today.	26	10	5	8	3	18	8	14	12	11	15
- No response	1	0	0	1	0	1	0	1	0	0	1

8. How much did you like working on the ECES system today?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. I liked it a lot.	61	23	15	16	7	43	18	41	20	30	31
2. I like it some, but not a lot.	17	6	3	3	5	10	7	14	3	10	7
3. I liked it a little.	5	1	3	1	0	3	2	4	1	4	1
4. I didn't like it at all.	3	1	0	2	0	3	0	1	2	2	1
- No response	1	0	0	1	0	1	0	1	0	0	1

9. How much help do you think you got today in understanding your interests better?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	22	6	1	8	7	16	6	14	8	11	11
2. Some help, but not a lot.	26	10	8	6	2	17	9	16	10	14	12
3. Just a little help.	9	4	2	2	1	7	2	8	1	6	3
4. No help at all.	12	4	5	1	2	6	6	11	1	7	5
5. Does not apply today.	14	5	5	4	0	10	4	10	4	7	7
- No response	4	2	0	2	0	4	0	2	2	1	3

10. How much help do you think you got today in understanding your abilities better?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	19	6	2	4	7	12	7	12	7	9	10
2. Some help, but not a lot.	25	10	4	7	4	19	6	17	8	16	9
3. Just a little help.	12	4	4	3	1	7	5	9	3	8	4
4. No help at all.	11	4	5	2	0	7	4	10	1	6	5
5. Does not apply today.	16	5	6	5	0	11	5	11	5	6	10
- No response	4	2	0	2	0	4	0	2	2	1	3

11. How much help do you think you got today in seeing connections between your interests and possible occupations?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	28	10	5	6	7	23	5	16	12	15	13
2. Some help, but not a lot.	23	8	4	8	3	15	8	15	8	15	8

11. (cont.)

	Total	9	10	11	12	W	B	C	N-C	M	F
3. Just a little help.	10	4	3	2	1	5	5	9	1	5	5
4. No help at all.	10	2	5	2	1	6	4	10	0	6	4
5. Does not apply today.	13	5	4	4	0	9	4	9	4	4	9
- No response	3	2	0	1	0	2	1	2	1	1	2

12. How much help do you think you got today in seeing connections between your abilities and possible occupations?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	24	8	4	5	7	17	7	15	9	13	11
2. Some help, but not a lot.	24	11	3	7	3	16	8	15	9	14	10
3. Just a little help.	9	2	3	3	1	6	3	8	1	6	3
4. No help at all.	12	4	5	3	0	7	5	12	0	8	4
5. Does not apply today.	16	5	6	4	1	12	4	10	6	4	12
- No response	2	1	0	1	0	2	0	1	1	1	1

13. How much help do you think you got today in discovering some new occupational possibilities you might look into?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	32	9	8	5	10	24	8	18	14	14	18
2. Some help, but not a lot.	16	7	2	6	1	11	5	12	4	9	7
3. Just a little help.	6	3	2	1	0	4	2	4	2	4	2
4. No help at all.	19	6	6	6	1	11	8	17	2	12	7
5. Does not apply today.	11	4	3	4	0	7	4	9	2	6	5
- No response	3	2	0	1	0	3	0	1	2	1	2

14. How much help do you think you got today in getting useful facts about occupations you explored?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	44	15	9	10	10	31	13	30	14	20	24
2. Some help, but not a lot.	13	7	2	4	0	8	5	8	5	8	5
3. Just a little help.	11	4	4	2	1	6	5	9	2	9	2
4. No help at all.	8	1	3	3	1	6	2	8	0	4	4
5. Does not apply today.	8	2	3	3	0	6	2	5	3	4	4
- No response	3	2	0	1	0	3	0	1	2	1	2

15. How much help do you think you got today in finding out about courses you would need for further education and training?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	30	13	6	6	5	16	14	15	15	14	16
2. Some help, but not a lot.	17	7	2	5	3	11	6	11	6	11	6
3. Just a little help.	9	3	3	3	0	9	0	8	1	7	2
4. No help at all.	12	3	5	3	1	7	5	11	1	7	5
5. Does not apply today.	15	3	4	5	3	13	2	14	1	6	9
- No response	4	2	1	1	0	4	0	2	2	1	3

16. How much help do you think you got today in finding out about high school majors you should consider?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	17	9	1	4	3	8	9	9	8	8	9
2. Some help, but not a lot.	15	6	2	3	4	10	5	7	8	8	7
3. Just a little help.	6	1	2	3	0	6	0	5	1	4	2
4. No help at all.	20	7	6	6	1	11	9	18	2	16	4
5. Does not apply today.	25	7	8	6	4	21	4	19	6	8	17
- No response	4	1	2	1	0	4	0	3	1	2	2

17. How much help do you think you got today in finding out about courses you might take in college or vocational school?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	28	9	9	6	4	21	7	14	14	17	11
2. Some help, but not a lot.	10	5	1	2	2	4	6	7	3	5	5
3. Just a little help.	5	1	2	1	1	3	2	3	2	4	1
4. No help at all.	16	5	4	6	1	10	6	15	1	10	6
5. Does not apply today.	23	8	5	6	4	18	5	20	3	8	15
- No response	5	3	0	2	0	4	1	2	3	2	3

18. How much help do you think you got today in finding out about colleges or vocational schools you might want to consider?

	Total	9	10	11	12	W	B	C	N-C	M	F
1. A lot of help.	8	1	2	4	1	7	1	2	6	4	4
2. Some help, but not a lot.	10	5	0	3	2	6	4	5	5	7	3
3. Just a little help.	7	3	3	1	0	3	4	4	3	5	2
4. No help at all.	25	8	7	7	3	13	12	22	3	17	8
5. Does not apply today.	30	11	7	6	6	24	6	24	6	11	19
- No response	7	3	2	2	0	7	0	4	3	2	5

Appendix D

FREQUENCY DISTRIBUTIONS AND SIGNIFICANT CHI SQUARES
OF PARENTAL RESPONSES TO ECES PARENT QUESTIONNAIRE

1. To what extent has your son or daughter discussed his use of ECES in exploring educational and career possibilities?

	Respondents (R)	Interviewees (I)	Respondents Parental Occ. Level 1-3*	4-7*
1. We discuss it regularly.	15	2	10	5
2. There has been quite a lot of discussion at different times.	38	2	25	13
3. There has been some discussion - but not much.	37	6	23	14
4. It was mentioned - but only briefly.	5	5	3	2
5. Not at all.	0	0	0	0

X^2 = 4.398, 1 df
signif. .05 level.

2. Omitted.

3. Do you feel that the ECES program can provide significant benefit for your child?

	(R)	(I)	1-3	4-7
1. Definitely cannot.	1	2	0	1
2. Probably cannot.	9	0	9	0
3. Probably can.	50	8	33	17
4. Definitely can.	35	5	19	16

4. Do you feel that you have become more involved in your child's educational or vocational planning since his or her participation in the ECES program?

	(R)	(I)	1-3	4-7
1. Definitely have not.	21	3	17	4
2. Probably have not.	21	9	17	4
3. Probably have.	33	1	18	15
4. Definitely have.	20	2	9	11

X^2 =9.673, 2 df
signif. .01 level.

5. Read statements A through G below, then select 1 of the 5 possible answers that best indicates how much help you feel your son or daughter has received from the ECES program in each of the areas below:

A. Seeing connections between his or her high school experience and future plans:

	(R)	(I)	1-3	4-7
1. None at all.	3	4	3	0
2. Hardly any help.	13	0	11	2

*Hamburger Modification of the Warner Occupational Rating Scale (1958).

5. A. (cont.)

	(R)	(I)	1-3	4-7
3. Some - but not much help.	30	6	22	8
4. A considerable amount of help.	33	3	18	15
5. A great deal of help.	11	2	5	6
- No response	5	0	2	3

X^2 = 5.081, 1df signif. 05 level.

B. Getting useful facts about occupations:

	(R)	(I)	1-3	4-7
1. None at all.	1	3	1	0
2. Hardly any help.	3	2	3	0
3. Some - but not much help.	22	2	15	7
4. A considerable amount of help.	40	7	30	10
5. A great deal of help.	24	1	10	14
- No response	5	0	2	3

C. Seeing connections between his or her <u>interests</u> and possible occupations:

	(R)	(I)	1-3	4-7
1. None at all.	2	4	2	0
2. Hardly any help.	7	2	8	0
3. Some - but not much help.	23	5	18	4
4. A considerable amount of help.	41	3	24	17
5. A great deal of help.	17	1	7	10
- No response	5	0	2	3

X^2 = 9.079, 2 df signif. .05 level.

D. Seeing connections between his or her <u>abilities</u> and possible occupations:

	(R)	(I)	1-3	4-7
1. None at all.	2	5	2	0
2. Hardly any help.	8	2	5	3
3. Some - but not much help.	21	1	17	4
4. A considerable amount of help.	40	4	26	14
5. A great deal of help.	20	3	9	11
- No response	4	0	2	2

E. Discovering new occupational possibilities he or she might look into:

	(R)	(I)	1-3	4-7
1. None at all.	4	7	4	0
2. Hardly any help.	16	3	13	3
3. Some - but not much help.	25	2	20	5
4. A considerable amount of help.	26	2	15	11
5. A great deal of help.	19	1	7	12
- No response	5	0	2	3

X^2 = 9.722, 1 df signif. .01 level.

X^2 = 10.807, 2 df signif. .01 level.

F. Discovering new educational possibilities he or she might look into:

	(R)	(I)	1-3	4-7
1. None at all.	12	5	14	0
2. Hardly any help.	16	1	10	4

5. F. (cont.)

	(R)	(I)	1-3	4-7
3. Some - but not much help.	22	3	18	4
4. A considerable amount of help.	24	2	12	12
5. A great deal of help.	17	4	6	11
- No response	4	0	1	3

X^2 = 13.878, 2 df signif. .001 level.

G. Making good decisions about what to do after high school:

	(R)	(I)	1-3	4-7
1. None at all.	16	5	15	2
2. Hardly any help.	10	0	10	0
3. Some - but not much help.	27	2	16	11
4. A considerable amount of help.	26	6	17	9
5. A great deal of help.	12	2	1	10
- No response	4	0	2	2

X^2 = 17.046, 2 df signif. .001 level.

6. Do you feel your son or daughter is better able to make decisions about his or her career as a result of participating in the ECES program?

	(R)	(I)	1-3	4-7
1. Definitely is not.	6	3	6	0
2. Probably is not.	18	0	15	3
3. Probably is.	44	8	26	18
4. Definitely is.	27	4	14	13

X^2 = 7.957, 2 df signif. .05 level.

7. Read statements A through F below, then select 1 of the 5 possible answers that best indicates how active you have been in each of the areas below:

A. Helping your son or daughter find summer employment that related to career goals:

	(R)	(I)	1-3	4-7
1. Not active at all.	45	8	30	15
2. Not very active.	19	2	14	5
3. Fairly active.	14	3	7	7
4. Very active.	6	2	3	3
5. Extremely active.	5	0	4	1
- No response	6	0	3	3

B. Meeting with a school guidance counselor to discuss your son's or daughter's situation and plans:

	(R)	(I)	1-3	4-7
1. Not active at all.	30	6	19	11
2. Not very active.	18	4	12	6
3. Fairly active.	24	3	13	11
4. Very active.	11	1	10	1
5. Extremely active.	9	1	5	4
- No response	3	0	2	1

7. C. Making sure that your son or daughter was meeting with the counselor:

	(R)	(I)	1-3	4-7
1. Not active at all.	13	6	6	6
2. Not very active.	16	2	11	5
3. Fairly active.	25	1	16	9
4. Very active.	22	2	15	7
5. Extremely active.	14	1	9	5
- No response	5	3	4	2

$X^2_{1\ df} = 11.789$, signif. .01 level.

D. Encouraging your son or daughter to talk with individuals employed in careers he or she is considering:

	(R)	(I)	1-3	4-7
1. Not active at all.	22	3	15	6
2. Not very active.	19	3	12	9
3. Fairly active.	22	5	14	8
4. Very active.	20	2	10	7
5. Extremely active.	7	1	6	2
- No response	5	1	4	2

E. Obtaining books, pamphlets, or other educational and occupational information to assist your son or daughter to decide on future plans:

	(R)	(I)	1-3	4-7
1. Not active at all.	25	9	15	10
2. Not very active.	24	2	17	7
3. Fairly active.	17	0	11	6
4. Very active.	16	2	9	7
5. Extremely active.	8	2	7	1
- No response	5	0	2	3

F. Obtaining private vocational testing and counseling for your son or daughter:

	(R)	(I)	1-3	4-7
1. Not active at all.	69	13	51	18
2. Not very active.	11	1	3	8
3. Fairly active.	3	0	0	3
4. Very active.	4	1	2	2
5. Extremely active.	3	0	3	0
- No response	5	0	2	3

$X^2_{1\ df} = 8.001$, signif. at .01 level.

8. Omitted.

9. If a service similar to ECES were available, in what grade would you want your son or daughter to begin using it?

Grade	(R)	(I)	1-3	4-7
5	3	1	1	2
6	3	2	2	1
7	20	2	9	11
8	14	0	11	3
9	22	1	14	8
10	21	7	16	5
11	9	2	5	4
12	0	0	0	0
-	3	0	3	0

10. If a service similar to ECES were available, how soon would you want your school district to have it?

	(R)	(I)	1-3	4-7
1. I'm really not concerned.	7	0	7	0
2. I wouldn't want them to have it at all.	1	0	1	0
3. They should have it, sometime in the future.	10	1	8	2
4. They should try to get it fairly quickly.	22	3	13	9
5. They should get it as soon as possible.	53	10	30	23

$X^2_{2\ df} = 7.370$, signif. .05 level.

11. Suppose that the ECES service were available through an outside agency, not connected with the school. If expected use might average 3 hours per year over 4 years of high school, how much do you think the service would be worth per hour?

	(R)	(I)	1-3	4-7
1. Less than $5 per hour.	32	5	26	6
2. Between $5 and $10.	41	8	24	18
3. Between $11 and $20.	12	1	6	6
4. More than $20 per hour.	3	0	1	2
- No response	6	1	4	2

$X^2_{2\ df} = 6.510$, signif. .05 level.

12. How interested would you be in providing the service for your child at the price you just gave?

	(R)	(I)	1-3	4-7
1. Definitely would not be interested.	5	4	4	1
2. Probably would not be interested.	14	1	11	3
3. Probably would be interested.	44	4	28	16
4. Definitely would be interested.	28	6	15	13
- No response	4	0	3	1

13. How willing would you be to provide the service for your child if the price would have to be twice what you just gave?

	(R)	(I)	1-3	4-7
1. Definitely would not be interested.	14	6	9	5
2. Probably would not be interested.	33	1	24	9
3. Probably would be interested.	31	5	18	13
4. Definitely would be interested.	11	2	5	6
- No response	6	1	5	1

14. In general, the Montclair High School guidance program has:

	(R)	(I)	1-3	4-7
1. been better than my expectations.	12	1	3	9
2. lived up to my expectations.	38	7	26	12

14. (cont.)

	(R)	(I)	1-3	4-7
3. I am unfamiliar with the program.	12	2	6	6
4. not lived up to my expectations.	19	2	15	4
5. definitely fell short of my expectations.	14	3	11	3

15. Omitted.

16. Do you feel that there should be more emphasis on educational and vocational guidance in high school than there is now?

	(R)	(I)	1-3	4-7
1. Definitely should not.	1	0	1	0
2. Probably should not.	3	3	3	0
3. Probably should.	25	3	17	8
4. Definitely should.	66	8	40	26
- No response	0	1	--	--

17. How far did you go in school?

	(R)	(I)	1-3	4-7
1. Less than high school diploma or equivalent.	20	5	8	4
2. High school diploma or equivalent.	14	4	35	4
3. Post-high school training other than junior college.	7	3	14	4
4. Junior college graduate.	2	1	7	2
5. College graduate.	28	2	23	1
6. Graduate school.	23	0	8	0
- No response	1	0	--	--

18. How far do you plan for your child to go in school?

	(R)	(I)	1-3	4-7
1. Less than high school diploma or equivalent.	0	0	0	0
2. High school diploma or equivalent.	3	0	0	3
3. Post-high school training other than junior college.	9	3	4	5
4. Junior college graduation.	2	0	1	1
5. College graduation.	51	11	32	19
6. Graduate school.	29	0	23	6
- No response	1	1	1	0

19. What are your occupations?

	Father (male guardian)		Mother (female guardian)	
Level	(R)	(I)	(R)	(I)
1	22	2	0	0
2	30	2	10	1
3	8	0	12	1
4	12	1	8	2
5	7	2	10	0
6	12	6	7	2
7	0	1	0	2
-	4	1	48	7

Appendix E

COUNSELOR PRE-TEST QUESTIONNAIRE

Please read the following 61 statements and indicate the extent to which you agree or disagree with each.

Please use the following answer code:

1. Disagree strongly
2. Disagree mildly
3. Indifferent or other
4. Agree mildly
5. Agree strongly

1. In general, students have enough information to make good decisions about what job or college they'll choose after leaving high school. 1. 1 2 3 4 5

2. In general, students are aware of the important factors to consider when making their decisions about what to do after high school. 2. 1 2 3 4 5

Most students generally have a good working knowledge concerning the following specific aspects about the occupations they are considering:

3. Specific job duties and requirements. 3. 1 2 3 4 5

4. Any possible areas of specialization. 4. 1 2 3 4 5

5. Different types of jobs where people in this occupation might be employed. 5. 1 2 3 4 5

6. The specific personal qualifications of the occupation. 6. 1 2 3 4 5

7. The physical working conditions. 7. 1 2 3 4 5

8. The specific educational requirements or training requirements needed for entry into the occupation. 8. 1 2 3 4 5

9. The courses offered by your high school that give them the best preparation for the occupation. 9. 1 2 3 4 5

10. The extent to which people in that occupation are in demand. 10. 1 2 3 4 5

11. The starting salary for the average person in the occupation. 11. 1 2 3 4 5

12. The chances for advancement. 12. 1 2 3 4 5

13. The number of different possible ways of entering the occupation. 13. 1 2 3 4 5

****

14. Most students have a great deal of general knowledge about the world of work. 14. 1 2 3 4 5

15. Students have information about enough different occupations to make appropriate initial decisions concerning the best directions for their careers. 15. 1 2 3 4 5

16. Students are aware of how their personal abilities and interests will be utilized in the occupations they are considering. 16. 1 2 3 4 5

17. I can devote adequate time to the students I see to help them with their career planning. 17. 1 2 3 4 5

18. I feel adequately equipped to handle most of the questions the students have about occupational information. 18. 1 2 3 4 5

19. I feel that the students make career plans without being aware of a great deal of information that they really should have in order to make the best decisions. 19. 1 2 3 4 5

20. I feel that most of my counseling time centers around dispensing and obtaining information for students. 20. 1 2 3 4 5

21. If students had outside access to appropriate and useful sources of information, then we could better use counseling time to work through career planning and decision-making. 21. 1 2 3 4 5

22. Students find present sources of occupational information difficult to use, and generally not applicable to their own situations or experience. 22. 1 2 3 4 5

23. Students are stimulated to explore further occupational information on their own, as a result of using present sources. 23. 1 2 3 4 5

24. Students plan their school courses with the idea that they want to make sure they have the greatest number of alternatives available to them when they make their next career decision. 24. 1 2 3 4 5

25. Most students have had actual working experience in the occupations they are considering. 25. 1 2 3 4 5

26. Most students have definite plans for what they will do after high school. 26. 1 2 3 4 5

27. These plans are the result of decisions made after considering adequate information related to their alternatives. 27. 1 2 3 4 5

****

<u>Most students have made definite plans in the following areas</u>:

28. Plans for obtaining more information and experience to help them make their career choice. 28. 1 2 3 4 5

29. Plans for getting qualified for a beginning (or summer) job in the occupation they presently prefer. 29. 1 2 3 4 5

30. Plans to take post-high school or summer school training which leads towards their preferred occupation. 30. 1 2 3 4 5

31. Plans to talk over their decisions about an occupation with an adult who knows their situation. 31. 1 2 3 4 5

32. Plans to search through available literature or occupational or educational information. 32. 1 2 3 4 5

33. Plans to overcome short-term obstacles to their long range plans. 33. 1 2 3 4 5

34. Plans to meet possible financial needs in college by getting a part-time job. 34. 1 2 3 4 5

35. Plans to take the necessary academic course work that leads to their preferred college major. 35. 1 2 3 4 5

36. Plans for getting into their preferred occupation after they have finished their educational or vocational training. 36. 1 2 3 4 5

37. Plans for qualifying for a regular, stable, secure job in their preferred occupation. 37. 1 2 3 4 5

38. Plans for obtaining advancement in their preferred occupation. 38. 1 2 3 4 5

****

Most students feel that the responsibility for making decisions in the following areas is primarily their own:

39. Choosing an occupation. 39. 1 2 3 4 5

40. Choosing a major field of study. 40. 1 2 3 4 5

41. Gaining entry into the next step in their plans (either college, job, or military). 41. 1 2 3 4 5

42. Making sure their present training is preparing them for the next step. 42. 1 2 3 4 5

43. Obtaining information about their educational or occupational preferences. 43. 1 2 3 4 5

44. Contacting people who are able to help them make decisions. 44. 1 2 3 4 5

45. Gaining work experience in the field of their preferred occupation. 45. 1 2 3 4 5

46. Visiting the college they might like to attend. 46. 1 2 3 4 5

****

In general, most students put a good deal of time, thought and effort into planning for their futures in the following areas:

47. Planning their career in general. 47. 1 2 3 4 5

48. Choosing high school courses. 48. 1 2 3 4 5

49. Choosing high school activities. 49. 1 2 3 4 5

50. Choosing out-of-school activities. 50. 1 2 3 4 5

51. Choosing between college, junior college, business school, technical school, work, military service, marriage and homemaking, etc. 51. 1 2 3 4 5

52. Choosing a particular college, branch of the service, mate, etc., among those that interest them. 52. 1 2 3 4 5

53. Understanding their abilities, interests, personality, etc. 53. 1 2 3 4 5

54. Choosing an occupation for which to prepare or in which to seek a job on leaving school. 54. 1 2 3 4 5

55. Planning for the next few days or weeks. 55. 1 2 3 4 5

56. Planning for a few months ahead. 56. 1 2 3 4 5

57. Planning for a year or so ahead. 57. 1 2 3 4 5

58. Planning for two or more years ahead. 58. 1 2 3 4 5

****

59. Students understand the relationships between their interests and abilities, the world of education, and the world of work. 59. 1 2 3 4 5

60. Students are aware of the many different educational and career alternatives open to them. 60. 1 2 3 4 5

61. Students are aware that they have control over their future educational and career decisions. 61. 1 2 3 4 5

****

Below are five possible statements to be used with items 62 through 75. Read the statements carefully before going on to item 62.

1. Hardly at all.
2. To only some extent.
3. To an average extent.
4. To a pretty good extent.
5. To a great extent.

Now read the following items and choose the statement above that best describes the situation.

62. To what extent has your school's guidance program met up to the students expectations? 62. 1 2 3 4 5

63. To what extent has the counseling they have received in the area of <u>educational</u> planning been effective? 63. 1 2 3 4 5

64. To what extent has the counseling they have received in the area of <u>occupational</u> planning been effective? 64. 1 2 3 4 5

65. To what extent have you been able to help the students find <u>definite paths</u> of action in reaching their goals? 65. 1 2 3 4 5

66. To what extent have you been able to help the students understand how his <u>strengths</u> and <u>weaknesses</u> fit in with his occupational goals? 66. 1 2 3 4 5

67. To what extent have you been able to help the student understand how his <u>strengths</u> and <u>weaknesses</u> fit in with his educational goals? 67. 1 2 3 4 5

68. To what extent have you been able to help the student <u>find new information</u> about his situation that helped make decisions? 68. 1 2 3 4 5

69. To what extent have you been able to make the student <u>feel more aware</u> of the possible <u>occupational</u> alternatives he has? 69. 1 2 3 4 5

70. To what extent have you been able to make the student <u>feel more aware</u> of the possible <u>educational</u> alternatives he has? 70. 1 2 3 4 5

71. To what extent have you been able to help the students become aware of the important factors on which to base their <u>occupational</u> decisions? 71. 1 2 3 4 5

72. To what extent have you been able to help the students become aware of the important factors on which to base their <u>educational</u> decisions? 72. 1 2 3 4 5

73. To what extent have you been able to help the students make better <u>occupational</u> decisions? 73. 1 2 3 4 5

74. To what extent have you been able to help the students make better <u>educational</u> decisions? 74. 1 2 3 4 5

75. To what extent have you been able to help the students become more effective people in general? 75. 1 2 3 4 5

****

Below are five possible statements to be used with items 76 through 85. They are concerned with the extent to which certain people are involved in the planning and decision-making of a student's career. <u>Read the statements carefully before going to item 76</u>.

1. Not involved.
2. Involved, but only to a small degree.
3. Somewhat involved.
4. Rather involved.
5. Very much involved.

Now, using the above statements, consider each of the following persons, and indicate the extent that you think they are involved in the planning and decision-making of the average student's career.

76. His father or male guardian. 76. 1 2 3 4 5

77. His mother or female guardian. 77. 1 2 3 4 5

78. His school counselors. 78. 1 2 3 4 5

79. His teachers. 79. 1 2 3 4 5

80. His brothers, sisters, or relatives. 80. 1 2 3 4 5

81. His coaches. 81. 1 2 3 4 5

82. His ministers, priest, or rabbi. 82. 1 2 3 4 5

83. Audio visual devices designed to help them make decisions. 83. 1 2 3 4 5

84. Private guidance counselors, not part of the school. 84. 1 2 3 4 5

85. The student himself. 85. 1 2 3 4 5

****

86. How many times have you met with the average student during the school year?

_____

87. How satisfied are you with this number of meetings?

1. Unsatisfied.
2. Not very satisfied.
3. Somewhat satisfied.
4. Rather satisfied.
5. Very satisfied. 87. 1 2 3 4 5

88. Who arranged <u>most</u> of the meetings?

1. The student.
2. I did.
3. The teacher, or some other school official.
4. Other _____ 88. 1 2 3 4
Print

89. At what grade do you first start seeing students regularly about future plans? _____

90. Do you think that this was the right time for them?

1. Too early.
2. About right.
3. Too late.

90. 1 2 3

91. When do you think would be the best time for most students to start seeing a counselor about their future plans?

_____
Print

_____

92. Please consider how much help you <u>are</u> giving your students on the following issues. Then, <u>rank</u> the issues in the order that shows which issues you are giving the most help on.

That issue in which you are giving the most help should be <u>1</u>.

That issue in which you are giving the next most help should be <u>2</u> and so on.

Issues:

Career and educational plans ____
High school course selection ____
Finding a job ____
Finding a college ____
Performance in school now ____
Personal problems ____
Other _____
Print

_____

93. Now, consider the same issues in terms of where you would like to give the most help to your students.

Rank them in order, so that the issue you would like to give the most help in is <u>1</u>.

Rank them in order, so that the issue you would like to give the most help in is <u>2</u> and so on.

Issues:

Career and educational plans ____
High school course selection ____
Finding a job ____
Finding a college ____
Performance in school now ____
Personal problems ____
Other _____
Print

_____

****

As students go on through school and to college, to work, etc., how do you see the decisions about alternatives open to them being made?

Circle the answer you feel best describes the situation for students in general.

	True	Uncertain	False
94. The decisions will be made some way or other.....	T	?	F
95. The school will tell them what they should do.....	T	?	F
96. Their parents will know what they should do.....	T	?	F
97. There is usually an experienced person to advise them..	T	?	F
98. Experience will show them what to do next.....	T	?	F
99. They will know enough about things to decide.....	T	?	F
100. They will be able to get help in thinking things through.....	T	?	F

101. What emphasis should there be on career and educational guidance?

1. The same as now.
2. More emphasis.
3. Less emphasis.
4. I don't know.

101. 1 2 3 4

If your answer was #2 or #3, what specific aspects of the career and educational guidance emphasis do you feel should be changed?

_____

Print

_____

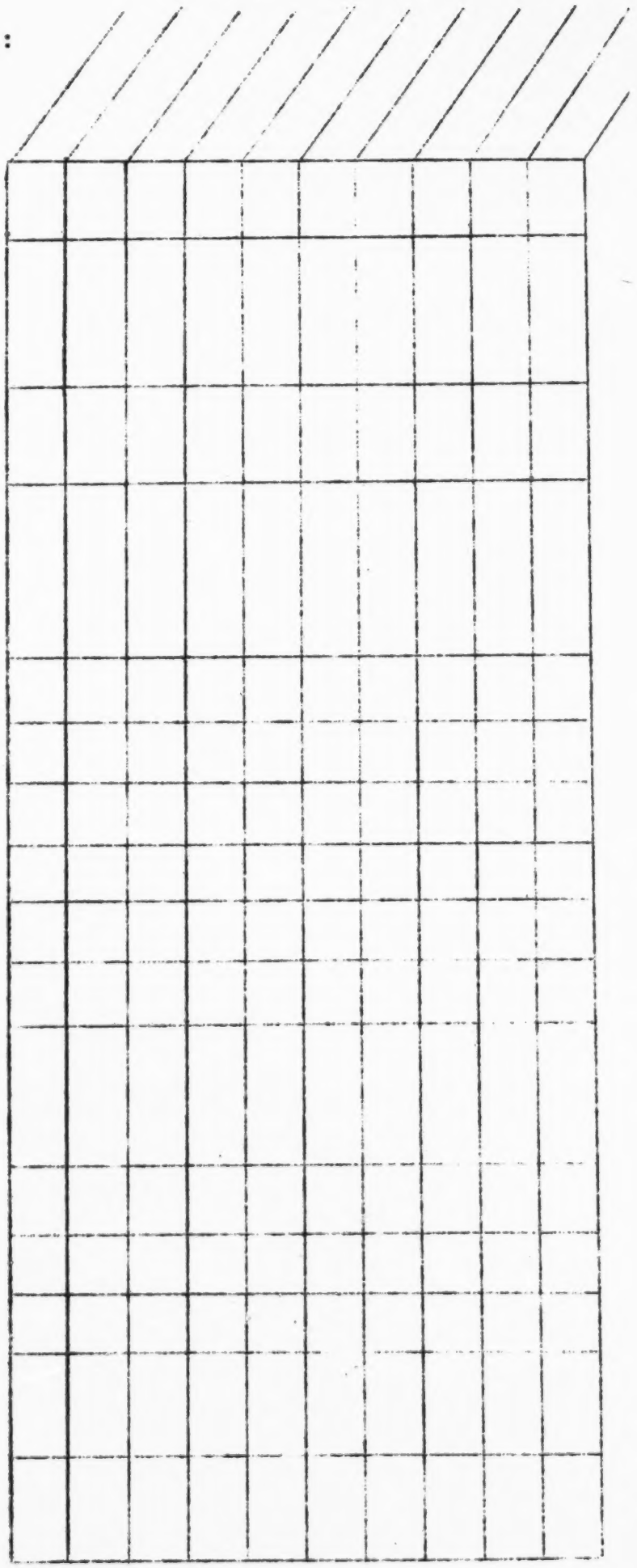
_____

Appendix F

COUNSELOR INTERACTION LOG

Counselor:_____ Student:

Date:_____



Interview Characteristics

1. Length (in minutes)

2. Type of Session (ed, voc, scheduling or other) If "scheduling" or "other" no further entries for this student

3. Topics dealt primarily with: Past, Present, Future

Principal Interview Activity
(1 = most important
2 = second most important)

1. Obtaining info from student

2. Giving info to student

3. Understanding information

4. Considering further sources of info

5. Examining alternatives

6. Ranking alternatives

7. Clarifying attitudes and feelings

Direction of Outcome
(check one per student)

1. Expansion of alternatives

2. Narrowing of alternatives

3. Making of decisions

4. Planning how to implement decisions

Summary (Superior, Good, Fair, Poor)

1. Use of counselor's time by student

2. Student progress in thinking about his future

Appendix G

TEACHER QUESTIONNAIRE

Name _____ Subject taught _____

Have any students talked to you about their use of the Educational and Career Exploration System (ECES)? _____

If yes, how many? _____
If no, please omit the next section and return this questionnaire to the ECES mail box in the Main Office of the high school.

Please use this rating scale for all the statements below:

1. Hardly at all.
2. To only some extent.
3. To an average extent.
4. To a pretty good extent.
5. To a great extent.

Consider those students who have talked with you about their experience with ECES. Please rate those students for each of the following statements:

1. I talked with these students about their use of ECES _____.

2. In general, these students were _____ enthusiastic about their use of ECES.

3. They are aware of the relationship between their present course work and future educational and/or occupational plans _____.

4. They plan to take the necessary high school course work leading to a preferred college major or vocational training program _____.

5. They plan to obtain more information and experience to help them make a career choice _____.

6. They are aware of possible educational alternatives _____.

7. They have specific information about occupations that interest them _____.

8. They consider the relationship between their personal interests and the characteristics of specific occupations _____.

9. They consider the relationship between their learning ability and the educational requirements of specific occupations _____.

10. They are aware of possible occupational alternatives _____.

Thank you for your cooperation and patience during this project. Please return this questionnaire to the ECES mail box in the Main Office of the high school.